

Access DB# 90110**SEARCH REQUEST FORM**

Scientific and Technical Information Center

Requester's Full Name: Susan Berman Examiner #: 67085 Date: 3-27-03  
 Art Unit: 1711 Phone Number 308 0040 Serial Number: 09 802 757  
 Mail Box and Bldg/Room Location: 4E16 Results Format Preferred (circle) PAPER DISK E-MAIL  
CP3

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*  
 Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Reactive Polymers

Inventors (please provide full names): Jörg Leukel, Peter Chabreck,  
Dieter Lohmann

Earliest Priority Filing Date: 3/10/2000

\*Fox Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please search the formula shown in the  
 attached claims.

Attaining copies of journal articles.

**STAFF USE ONLY**

	Type of Search	Vendors and cost where applicable.
Searcher: <u>K. Fuller</u>	NA Sequence (#) <u>STN</u>	<u>✓</u>
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) <u>2</u>	Questel/Orbit _____
Date Searcher Picked Up: _____	Bibliographic _____	Dr Link _____
Date Completed: <u>3/28/03</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: <u>20</u>	Fulltext _____	Sequence Systems _____
Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____
Online Time: <u>85</u>	Other _____	Other (specify) _____

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TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

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PROPERTIES for more information. See STNote 27, Searching Properties  
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<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

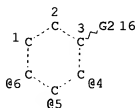
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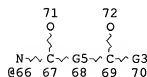
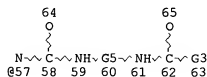
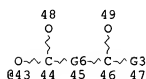
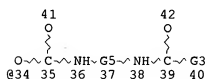
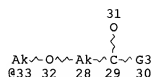
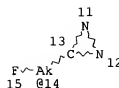
FILE COVERS 1907 - 28 Mar 2003 VOL 138 ISS 14  
FILE LAST UPDATED: 27 Mar 2003 (20030327/ED)

This file contains CAS Registry Numbers for easy and accurate  
substance identification.

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L33 STR



G1 @7



VAR G1=14/10  
VAR G2=18/19/20/24/33/34/43/51/52/53/57/66

VAR G3=O/N

VAR G4=O/S

VAR G5=AK/CB

VAR G6=AK/CB

VFA 7-4/5/6 U

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 72

STEREO ATTRIBUTES: NONE

L35 5030 SEA FILE=REGISTRY SSS FUL L33

L36 2821 SEA FILE=HCAPLUS ABB=ON L35

L37 1283 SEA FILE=HCAPLUS ABB=ON L36(L) (PREP OR IMF OR SPN)/RL

L38 18 SEA FILE=HCAPLUS ABB=ON L37 AND REACT?(3A) POLYMER?

L39 8 SEA FILE=HCAPLUS ABB=ON L37 AND COATING#/SC, SX

L40 16 SEA FILE=HCAPLUS ABB=ON L37 AND (?TELOM? OR ?OLIGOMER?)

L42 28 SEA FILE=HCAPLUS ABB=ON L37(L) (?THIO? OR ?MERCAPTO?)

L45 1 SEA FILE=HCAPLUS ABB=ON L42 AND PHARMACE?/SC, SX

L47 38 SEA FILE=HCAPLUS ABB=ON L38 OR L39 OR L40 OR L45

L49 208 SEA FILE=REGISTRY ABB=ON L35 AND PMS/CI

L50 156 SEA FILE=HCAPLUS ABB=ON L49

L51 56 SEA FILE=HCAPLUS ABB=ON L50(L) (PREP OR IMF OR SPN)/RL

L52 14 SEA FILE=HCAPLUS ABB=ON L51 AND (COATING? OR PHARMACE?)/SC, SX

5,030 structures  
from this query  
which covers  
2a-2g in claim!

L53	49 SEA FILE=HCAPLUS ABB=ON	L47 OR L52
L54	117 SEA FILE=HCAPLUS ABB=ON	L35/DP
L56	1 SEA FILE=HCAPLUS ABB=ON	L54 AND (?TELOM? OR ?OLIGOM?)
L57	5 SEA FILE=HCAPLUS ABB=ON	L54 AND COATING?/SC, SX
L58	15 SEA FILE=HCAPLUS ABB=ON	L54 AND PHARMACE?/SC, SX
L59	55 SEA FILE=HCAPLUS ABB=ON	L53 OR (L56 OR L57 OR L58)

=> d l59 all 1-55 hitstr

L59 ANSWER 1 OF 55 HCAPLUS COPYRIGHT 2003 ACS  
 AN 2002:928428 HCAPLUS  
 DN 138:106289  
 TI Hydrogen Bond-Stabilized Helix Formation of a m-Phenylene Ethynylene  
**Oligomer**  
 AU Cary, Jennifer M.; Moore, Jeffrey S.  
 CS Departments of Chemistry and Materials Science Engineering, University of  
 Illinois, Urbana, IL, 61801, USA  
 SO Organic Letters (2002), 4(26), 4663-4666  
 CODEN: ORLEF7; ISSN: 1523-7060  
 PB American Chemical Society  
 DT Journal  
 LA English  
 CC 22-3 (Physical Organic Chemistry)  
 Section cross-reference(s): 35  
 AB Incorporation of a single hydrogen bonded .beta.-turn mimic in the  
 backbone of a m-phenylene ethynylene **oligomer** is shown to affect  
 the thermodyn. properties of the folding reaction. Isomeric  
**oligomers** with and without the .beta.-turn mimic undergo  
 solvophobic helix formation, but the hydrogen bonded **oligomer**  
 was found to form a more stable helix with a higher tolerance to solvent  
 denaturation than its isomeric, non-hydrogen bonded **oligomer**.  
 ST hydrogen bond stabilized helix formation phenylene ethynylene  
**oligomer**  
 IT Helix (conformation)  
 Hydrogen bond  
 .beta.-Turn  
 (H bond of .beta.-turn mimic provides enough energy to lock one  
 diphenylacetylene unit in the cisoid conformation required for helix  
 formation; hydrogen bond-stabilized helix formation of a m-phenylene  
 ethynylene **oligomer**)  
 IT Conformational transition  
 (as function of solvent; hydrogen bond-stabilized helix formation of a  
 m-phenylene ethynylene **oligomer**)  
 IT **Oligomers**  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP  
 (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC  
 (Process)  
 (hydrogen bond-stabilized helix formation of a m-phenylene ethynylene  
**oligomer**)  
 IT Free energy  
 (of folding; hydrogen bond-stabilized helix formation of a m-phenylene  
 ethynylene **oligomer**)  
 IT Crystal structure  
 Molecular structure  
 (of model of H-bonded m-phenylene ethynylene monomer; hydrogen  
 bond-stabilized helix formation of a m-phenylene ethynylene

- oligomer)**
- IT Stabilization energy  
(provided by .beta.-turn mimic; hydrogen bond-stabilized helix formation of a m-phenylene ethynylene **oligomer**)
- IT Denaturation  
(solvent; hydrogen bond-stabilized helix formation of a m-phenylene ethynylene **oligomer**)
- IT 615-43-0, 2-Iodoaniline 13296-94-1, 2-Bromo-4-nitroaniline  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(acylation; hydrogen bond-stabilized helix formation of a m-phenylene ethynylene **oligomer**)
- IT 488118-51-OP  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)  
(control **oligomer**; hydrogen bond-stabilized helix formation of a m-phenylene ethynylene **oligomer**)
- IT 488082-56-OP  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(control with disengaged H bond; hydrogen bond-stabilized helix formation of a m-phenylene ethynylene **oligomer**)
- IT 618-89-3P, Methyl 3-bromobenzoate  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(cross coupling; hydrogen bond-stabilized helix formation of a m-phenylene ethynylene **oligomer**)
- IT 610-94-6, Methyl 2-bromobenzoate 488082-63-9 488082-65-1  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(cross-coupling; hydrogen bond-stabilized helix formation of a m-phenylene ethynylene **oligomer**)
- IT 1066-54-2P, (Trimethylsilyl)acetylene 19591-17-4P, 2-Iodoacetanilide  
488082-57-1P 488082-59-3P 488082-61-7P 488082-62-8P  
488082-64-OP 488082-67-3P 488082-69-5P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(cross-coupling; hydrogen bond-stabilized helix formation of a m-phenylene ethynylene **oligomer**)
- IT 107793-07-7P 110598-59-9P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(deprotection/cross coupling; hydrogen bond-stabilized helix formation of a m-phenylene ethynylene **oligomer**)
- IT 488082-58-2P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(deprotection/cross-coupling; hydrogen bond-stabilized helix formation of a m-phenylene ethynylene **oligomer**)
- IT 488082-60-6P 488082-66-2P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(deprotection/iodination; hydrogen bond-stabilized helix formation of a m-phenylene ethynylene **oligomer**)
- IT 488082-68-4P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(deprotection; hydrogen bond-stabilized helix formation of a m-phenylene ethynylene **oligomer**)
- IT 488082-52-6P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(model of H-bonded m-phenylene ethynylene monomer, crystallog.;  
hydrogen bond-stabilized helix formation of a m-phenylene ethynylene  
oligomer)

IT 98546-30-6P 436090-22-1P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(protection; hydrogen bond-stabilized helix formation of a m-phenylene  
ethynylene oligomer)

IT 6326-42-7P, Methyl 2-iodo-4-nitrobenzoate 57045-86-0P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(redn.; hydrogen bond-stabilized helix formation of a m-phenylene  
ethynylene oligomer)

IT 488118-44-1P  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP  
(Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC  
(Process)  
(target oligomer; hydrogen bond-stabilized helix formation of  
a m-phenylene ethynylene oligomer)

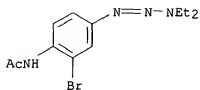
RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE

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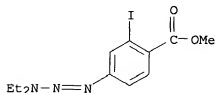
IT 488082-57-1P 488082-59-3P 488082-64-0P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP  
(Preparation); RACT (Reactant or reagent)  
(cross-coupling; hydrogen bond-stabilized helix formation of a  
m-phenylene ethynylene oligomer)

RN 488082-57-1 HCAPLUS

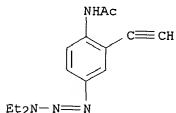
CN Acetamide, N-[2-bromo-4-(3,3-diethyl-1-triazenyl)phenyl]- (9CI) (CA INDEX  
NAME)



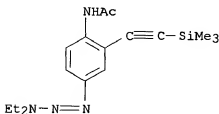
RN 488082-59-3 HCAPLUS  
CN Benzoic acid, 4-(3,3-diethyl-1-triazenyl)-2-iodo-, methyl ester (9CI) (CA INDEX NAME)



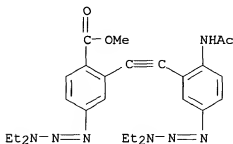
RN 488082-64-0 HCAPLUS  
CN Acetamide, N-[4-(3,3-diethyl-1-triazenyl)-2-ethynylphenyl]- (9CI) (CA INDEX NAME)



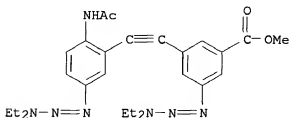
IT 488082-58-2P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP  
(Preparation); RACT (Reactant or reagent)  
(deprotection/cross-coupling; hydrogen bond-stabilized helix formation  
of a m-phenylene ethynylene oligomer)  
RN 488082-58-2 HCAPLUS  
CN Acetamide, N-[4-(3,3-diethyl-1-triazenyl)-2-[(trimethylsilyl)ethynyl]phenyl]- (9CI) (CA INDEX NAME)



IT 488082-60-6P 488082-66-2P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP  
 (Preparation); RACT (Reactant or reagent)  
 (deprotection/iodination; hydrogen bond-stabilized helix formation of a  
 m-phenylene ethynylene oligomer)  
 RN 488082-60-6 HCAPLUS  
 CN Benzoic acid, 2-[[2-(acetylamino)-5-(3,3-diethyl-1-  
 triazenyl)phenyl]ethynyl]-4-(3,3-diethyl-1-triazenyl)-, methyl ester (9CI)  
 (CA INDEX NAME)



RN 488082-66-2 HCAPLUS  
 CN Benzoic acid, 3-[[2-(acetylamino)-5-(3,3-diethyl-1-  
 triazenyl)phenyl]ethynyl]-5-(3,3-diethyl-1-triazenyl)-, methyl ester (9CI)  
 (CA INDEX NAME)



L59 ANSWER 2 OF 55 HCAPLUS COPYRIGHT 2003 ACS  
 AN 2002:573371 HCAPLUS  
 DN 137:126484  
 TI Process for modifying a surface with functionalized comb polymers  
 IN Lohmann, Dieter; Chabreck, Peter; Leukel, Joerg  
 PA Novartis A.-G., Switz.; Novartis-Erfindungen Verwaltungsgesellschaft  
 m.b.H.  
 SO Eur. Pat. Appl., 35 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 IC ICM C08J007-04  
 ICS G02B001-04  
 CC 42-2 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 63  
 FAN.CNT 1

*applicant*

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI EP 1227120 A2 20020731 EP 2001-664 20011127  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR  
 JP 2002348393 A2 20021204 JP 2002-12806 20020122  
 US 2002172831 A1 20021121 US 2002-56168 20020124  
 PRAI EP 2001-810061 A 20010124

AB The invention relates to a process for coating a material surface comprising the steps of: (a) applying to the material surface one or more different comb-type polymers comprising a polymer backbone and side chains pendently attached thereto, wherein at least a part of the side chains carry a triggerable precursor for carbene or nitrene formation; and (b) fixing the polymer(s) onto the material surface using heat or radiation, in particular radiation such as UV or visible light. The polymers of the invention are useful for the modification of material surfaces and are particularly suitable for providing biomedical articles such as contact lenses with a hydrophilic coating. A polymer formed by polymn. of a macromer formed from a cysteamine hydrochloride-N,N-dimethyl acrylamide-N-methacryloyl-N'-(4-(2,2,2-trifluoro-1-diazirinylolethyl)benzoyl)-1,3-diaminopropane **telomer** and isocyanatoethyl methacrylate was linked to the surface of a contact lens by UV irradiation.

ST carbene nitrene precursor **telomer** coating biomedical device

IT Eye  
 (artificial cornea; process for modifying a surface with functionalized comb polymers)

IT Coating process  
 Contact lenses  
 Heat  
 Intraocular lenses  
 Light  
 Medical equipment  
 UV radiation  
 (process for modifying a surface with functionalized comb polymers)

IT 443895-31-6P **443895-34-9P**  
 RL: **IMF (Industrial manufacture)**; RCT (Reactant); **PREP (Preparation)**; RACT (Reactant or reagent)  
 (process for modifying a surface with functionalized comb polymers)

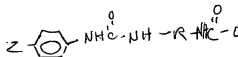
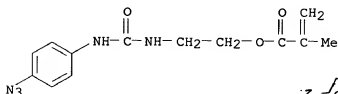
IT 556-52-5DP, Glycidol, reaction products with allylamine-lactobionolactone graft copolymer 30674-80-7DP, reaction products with acrylamide **telomers**, comb polymers, Hofmann degrading products, activated 249758-93-8DP, reaction products with isocyanatoethyl methacrylate, comb polymers, Hofmann degrading products, activated 443895-28-1DP, reaction products with glycidol and 4-(2,2,2-trifluoro-1-diazirinylolethyl)phenylisocyanate 443895-30-5DP, reaction products with allylamine-lactobionolactone graft copolymer **443895-38-3DP**, reaction products with isocyanatoethyl methacrylate 443895-41-8DP, reaction products with isocyanatoethyl methacrylate  
 RL: **IMF (Industrial manufacture)**; TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
 (process for modifying a surface with functionalized comb polymers)

IT 72607-53-5, N-(3-Aminopropyl)-methacrylamide hydrochloride 87736-89-8  
 91159-79-4  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (process for modifying a surface with functionalized comb polymers)

IT **443895-34-9P**  
 RL: **IMF (Industrial manufacture)**; RCT (Reactant); **PREP (Preparation)**; RACT (Reactant or reagent)  
 (process for modifying a surface with functionalized comb polymers)

RN 443895-34-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-[[[(4-azidophenyl)amino]carbonyl]amino]ethyl ester (9CI) (CA INDEX NAME)



IT 443895-38-3DP, reaction products with isocyanatoethyl methacrylate  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (process for modifying a surface with functionalized comb polymers)

RN 443895-38-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-[[[(4-azidophenyl)amino]carbonyl]amino]ethyl ester, telomer with 2-aminoethanethiol hydrochloride and N,N-dimethyl-2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 156-57-0

CMF C2 H7 N S . Cl H

H<sub>2</sub>N-CH<sub>2</sub>-CH<sub>2</sub>-SH

● HCl

CM 2

CRN 443895-37-2

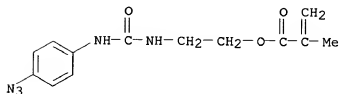
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CCI PMS

CM 3

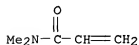
CRN 443895-34-9

CMF Cl3 H15 N5 O3



CM 4

CRN 2680-03-7  
CMF C5 H9 N O



L59 ANSWER 3 OF 55 HCAPLUS COPYRIGHT 2003 ACS

AN 2002:157622 HCAPLUS

DN 136:205500

TI Preparation of polymer surfaces for biocompatible materials

IN Ulbricht, Mathias; Thom, Volkmar; Jankova, Katja; Altankov, George;

Jonsson, Gunnar

PA Surfac Aps, Den.

SO PCT Int. Appl., 217 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM A61L033-00

CC 63-7 (Pharmaceuticals)

Section cross-reference(s): 37

FAN.CNT 1

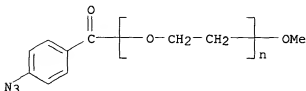
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002015955	A2	20020228	WO 2001-DK557	20010823
	WO 2002015955	A3	20020502		
	W:	AE, AG, AI, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, FJ, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	AU 2001081758	A5	20020304	AU 2001-81758	20010823
PRAI	DK 2000-1250	A	20000823		
	WO 2001-DK557	W	20010823		
AB	<p>The present invention concerns a novel approach of creating biocompatible surfaces, the surfaces being capable of functionally interacting with biol. materials. The biocompatible surfaces comprise at least 2 components, such as a hydrophobic substratum and a macromol. of hydrophilic nature, which form together the novel biocompatible surfaces. The novel approach is based on contacting the hydrophobic substratum with a laterally patterned monomol. layer of the hydrophilic and flexible macromols., exhibiting a pronounced excluded vol. The 2-component surface thus formed, is, with respect to polarity and morphol., a molecularly heterogeneous surface. Structural features of the macromol. monolayer (e.g., the layer thickness or its lateral d.) are detd. by the structural features of the layer forming macromols. (their MW or their mol. architecture) and the method of creating the monomol. layer (e.g., by phys. or chem. sorption, or by chem. binding the macromols.). The structural features of the layer forming macromols. (s) is in turn detd. by</p>				

synthesis. The amt. and conformation and also the biol. activity of biol. materials (e.g., polypeptides) which contact the novel biocompatible surface, is detd. and maintained by the cooperative action of the underlying hydrophobic substratum and the macromol. layer. It becomes possible to maintain and control biol. interactions between said contacted polypeptides and other biol. compds. e.g., cells, antibodies and the like. Consequently, the present invention aims to reduce and/or eliminate the deactivation and/or denaturation assocd. with the contacting of polypeptides and/or other biol. material to a hydrophobic substratum surface. Thus, .alpha.-4-azidobenzoyl-.omega.-methoxy PEG was prepd. and grafted to polysulfone surfaces and their wettability was detd. The adsorption properties of the grafted polymer were evaluated by exposing it to BSA soln.

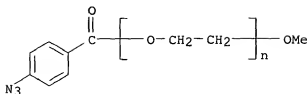
- ST polymer surface biocompatible material
- IT Immunoglobulins
  - RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
  - (anti-, bovine, horseradish peroxidase conjugates; prepn. of polymer surfaces for biocompatible materials)
- IT Organ, animal
  - (artificial; prepn. of polymer surfaces for biocompatible materials)
- IT Polyesters, biological studies
  - RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
  - (caprolactone-based; prepn. of polymer surfaces for biocompatible materials)
- IT Polyolefins
  - RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
  - (chlorosulfonated; prepn. of polymer surfaces for biocompatible materials)
- IT Polyesters, biological studies
  - RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
  - (dilactone-based; prepn. of polymer surfaces for biocompatible materials)
- IT Prosthetic materials and Prosthetics
  - (implants; prepn. of polymer surfaces for biocompatible materials)
- IT Polyesters, biological studies
  - RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
  - (lactide; prepn. of polymer surfaces for biocompatible materials)
- IT Antibodies
  - RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
  - (monoclonal; prepn. of polymer surfaces for biocompatible materials)
- IT Polyethers, biological studies
  - RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
  - (ortho ester group-contg.; prepn. of polymer surfaces for biocompatible materials)
- IT Polysulfones, biological studies
  - RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
  - (polyoxyalkylene-, graft; prepn. of polymer surfaces for biocompatible materials)
- IT Polyoxyalkylenes, biological studies
  - RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
  - (polysulfone-, graft; prepn. of polymer surfaces for biocompatible materials)
- IT Adhesion, biological
  - Adsorption
  - Animal virus
  - Bacteriophage

Biocompatibility  
 Conformation  
 Contact angle  
 Drug delivery systems  
 Eukaryota  
 Fibroblast  
 Human  
 Hydrophilicity  
 Liver  
 Molecular weight distribution  
 Plant virus  
 Prokaryote  
 Wettability  
 (prepn. of polymer surfaces for biocompatible materials)  
 IT Fibronectins  
 Proteins  
 Vitronectin  
 RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
 (prepn. of polymer surfaces for biocompatible materials)  
 IT Polyoxymethylenes, biological studies  
 RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (prepn. of polymer surfaces for biocompatible materials)  
 IT Antibodies  
 Antigens  
 Carbohydrates, biological studies  
 Cytokines  
 Fluoropolymers, biological studies  
 Interleukins  
 Lipids, biological studies  
 Macromolecular compounds  
 Nucleic acids  
 Peptides, biological studies  
 Polyamides, biological studies  
 Polyanhydrides  
 Polycarbonates, biological studies  
 Polyesters, biological studies  
 Polymers, biological studies  
 Polyoxymethylenes, biological studies  
 Polyoxymethylenes, biological studies  
 Polyurethanes, biological studies  
 Receptors  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (prepn. of polymer surfaces for biocompatible materials)  
 IT Albumins, biological studies  
 RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
 (serum; prepn. of polymer surfaces for biocompatible materials)  
 IT 9003-99-0D, Peroxidase, Ig conjugates  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (horseradish; prepn. of polymer surfaces for biocompatible materials)  
 IT 74-85-1D, Ethene, polymers with .alpha.-olefins  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (low d. linear; prepn. of polymer surfaces for biocompatible materials)  
 IT 219676-68-3DP, graft polymers with polysulfones  
 RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation);

- USES (Uses)  
(prepn. of polymer surfaces for biocompatible materials)
- IT 6427-66-3 9004-74-4 14848-01-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(prepn. of polymer surfaces for biocompatible materials)
- IT 219676-68-3P  
RL: RCT (Reactant); SPN (Synthetic preparation); THU  
(Therapeutic use); BIOL (Biological study); PREP (Preparation);  
RACT (Reactant or reagent); USES (Uses)  
(prepn. of polymer surfaces for biocompatible materials)
- IT 74-85-1D, Ethylene, polymers with dienes and propylene 79-10-7D, Acrylic acid, esters, polymers 115-07-1D, Propylene, polymers with dienes and ethylene 7440-57-5, Gold, biological studies 7631-86-9, Silica, biological studies 9002-84-0, Teflon 9002-86-2, PVC 9002-88-4, Polyethylene 9002-89-5, Poly(vinyl alcohol) 9003-07-0, Polypropylene 9003-53-6, Polystyrene 9004-35-7D, Cellulose acetate, acyl derivs. 9010-77-9, Acrylic acid-ethylene copolymer 9010-79-1, Ethylene-propylene copolymer 9010-86-0, Ethyl acrylate-ethylene copolymer 24937-78-8, EVA 24980-41-4, Polycaprolactone 24981-14-4, PVF 25103-74-6, Methyl acrylate-ethylene copolymer 25232-42-2, Poly(vinylimidazole) 25248-42-4, Polycaprolactone 25322-68-3, Polyethylene glycol 25750-84-9, Butyl acrylate-ethylene copolymer 26009-03-0, Poly(glycolic acid) 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26124-68-5, Poly(glycolic acid) 26680-10-4, Poly(lactide) 26780-50-7, Glycolide-lactide copolymer  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(prepn. of polymer surfaces for biocompatible materials)
- IT 999-97-3, Hexamethyldisilazane  
RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(silicon treated with; prepn. of polymer surfaces for biocompatible materials)
- IT 219676-68-3DP, graft polymers with polysulfones  
RL: PRP (Properties); SPN (Synthetic preparation); THU  
(Therapeutic use); BIOL (Biological study); PREP (Preparation);  
USES (Uses)  
(prepn. of polymer surfaces for biocompatible materials)
- RN 219676-68-3 HCAPLUS  
CN Poly(oxy-1,2-ethanediyl), .alpha.-(4-azidobenzoyl)-.omega.-methoxy- (9CI)  
(CA INDEX NAME)



- IT 219676-68-3P  
RL: RCT (Reactant); SPN (Synthetic preparation); THU  
(Therapeutic use); BIOL (Biological study); PREP (Preparation);  
RACT (Reactant or reagent); USES (Uses)  
(prepn. of polymer surfaces for biocompatible materials)
- RN 219676-68-3 HCAPLUS  
CN Poly(oxy-1,2-ethanediyl), .alpha.-(4-azidobenzoyl)-.omega.-methoxy- (9CI)  
(CA INDEX NAME)



L59 ANSWER 4 OF 55 HCAPLUS COPYRIGHT 2003 ACS  
 AN 2001:85016 HCAPLUS  
 DN 134:281319  
 TI Chain Length-Dependent Affinity of Helical Foldamers for a Rodlike Guest  
 AU Tanatani, Aya; Mio, Matthew J.; Moore, Jeffrey S.  
 CS Roger Adams Laboratory Department of Chemistry and Materials Science &  
 Engineering, University of Illinois at Urbana-Champaign, Urbana, IL,  
 61801, USA  
 SO Journal of the American Chemical Society (2001), 123(8), 1792-1793  
 CODEN: JACSAT; ISSN: 0002-7863  
 PB American Chemical Society  
 DT Journal  
 LA English  
 CC 36-2 (Physical Properties of Synthetic High Polymers)  
 AB There was a chain length-dependent recognition by m-phenyleneethynylene  
**oligomers** having tris(ethylene glycol) monomethyl ether side chain  
 for rodlike guest cis-(2S,5S)-2,5-dimethyl-N,N'-diphenylpiperazine (I).  
 The binding affinities of I for members of the **oligomers** were  
 detd. by CD measurements. The results supported the hypothesis that all  
 members of **oligomers** exist in soln. as conformationally  
 well-ordered foldamers with chiral cylindrical cavities capable of binding  
 chiral rodlike guest mols.  
 ST phenylene ethynylene **oligomer** binding rodlike  
 dimethyldiphenylpiperazine  
 IT Circular dichroism  
 Polymer chains  
 (chain length-dependent recognition by phenyleneethynylene  
**oligomers** having tris(ethylene glycol) monomethyl ether side  
 chain for rodlike guest dimethyldiphenylpiperazine)  
 IT Polyphenyls  
 RL: PRP (Properties)  
 (polyacetylene-; chain length-dependent recognition by  
 phenyleneethynylene **oligomers** having tris(ethylene glycol)  
 monomethyl ether side chain for rodlike guest  
 dimethyldiphenylpiperazine)  
 IT Polyacetylenes, properties  
 RL: PRP (Properties)  
 (polyphenyl-; chain length-dependent recognition by phenyleneethynylene  
**oligomers** having tris(ethylene glycol) monomethyl ether side  
 chain for rodlike guest dimethyldiphenylpiperazine)  
 IT 24425-88-5 237060-80-9  
 RL: PRP (Properties)  
 (chain length-dependent recognition by phenyleneethynylene  
**oligomers** having tris(ethylene glycol) monomethyl ether side  
 chain for rodlike guest dimethyldiphenylpiperazine)  
 IT 333428-69-6P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (chain length-dependent recognition by phenyleneethynylene

- oligomers having tris(ethylene glycol) monomethyl ether side chain for rodlike guest dimethyldiphenylpiperazine)
- IT 197296-89-2 223774-31-0  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(in prepn. of phenyleneethynylene oligomer having tris(ethylene glycol) monomethyl ether side chain)
- IT 1142-20-7 2491-20-5  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(in prepn. of rodlike guest dimethyldiphenylpiperazine for binding by phenyleneethynylene oligomers)
- IT 2483-51-4P 6284-84-0P 72904-45-1P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(in prepn. of rodlike guest dimethyldiphenylpiperazine for binding by phenyleneethynylene oligomers)
- IT 333428-70-9P 333428-71-0P 333428-72-1P 333428-73-2P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and characterization of)
- IT 112-35-6, Triethylene glycol monomethyl ether  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction with iodobenzoic acid)
- IT 618-51-9, 3-Iodobenzoic acid  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction with triethylene glycol monomethyl ether)
- RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE
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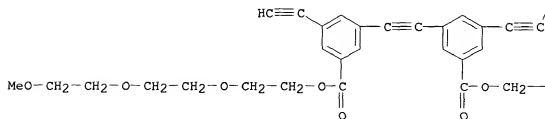
IT 333428-73-2P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. and characterization of)

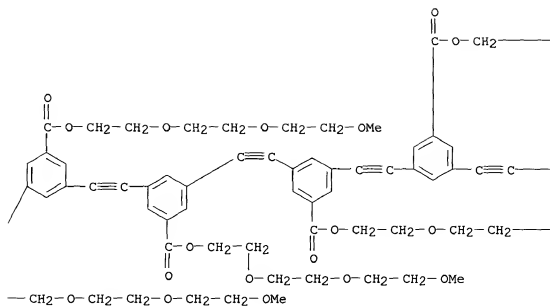
RN 333428-73-2 HCAPLUS

CN Benzoic acid, 3-[[[3-[[[3-[[3-(3,3-diethyl-1-triazenyl)-5-(1-oxo-2,5,8,11-tetraoxadodec-1-yl)phenyl]ethynyl]-5-(1-oxo-2,5,8,11-tetraoxadodec-1-yl)phenyl]ethynyl]-5-(1-oxo-2,5,8,11-tetraoxadodec-1-yl)phenyl]ethynyl]-5-[[[3-[[[3-[[[3-ethynyl-5-(1-oxo-2,5,8,11-tetraoxadodec-1-yl)phenyl]ethynyl]-5-(1-oxo-2,5,8,11-tetraoxadodec-1-yl)phenyl]ethynyl]-5-(1-oxo-2,5,8,11-tetraoxadodec-1-yl)phenyl]ethynyl]-5-(1-oxo-2,5,8,11-tetraoxadodec-1-yl)phenyl]ethynyl]-, 2-[2-(2-methoxyethoxy)ethoxy]ethyl ester (9CI) (CA INDEX NAME)

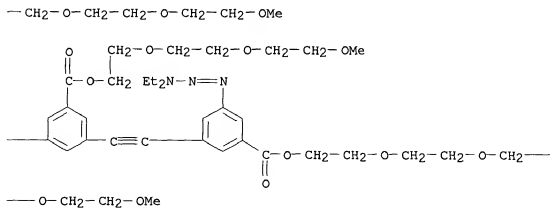
PAGE 1-A



PAGE 1-B



PAGE 1-C



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IT 223519-45-7P

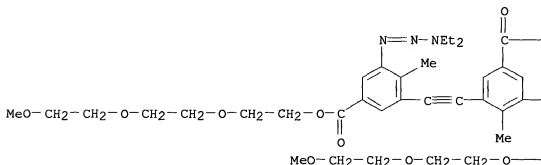
RL: PRP (Properties); **SPN (Synthetic preparation)**; **PREP (Preparation)**

(hexagonal packing of helical oligo(m-phenylene ethynylene)s in solid state induced by Me endo-substitution forming nanotubules)

RN 223519-45-7 HCAPLUS

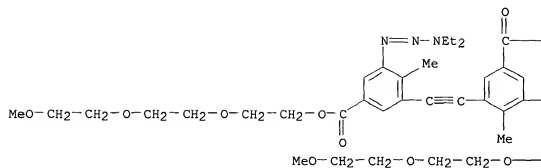
CN Benzoic acid, 3-[[[3-[[3-(3,3-diethyl-1-triazenyl)-2-methyl-5-(1-oxo-2,5,8,11-tetraoxadodec-1-yl)phenyl]ethynyl]-2-methyl-5-(1-oxo-2,5,8,11-tetraoxadodec-1-yl)phenyl]ethynyl]-5-[[[3-[[3-ethynyl-2-methyl-5-(1-oxo-2,5,8,11-tetraoxadodec-1-yl)phenyl]ethynyl]-2-methyl-5-(1-oxo-2,5,8,11-tetraoxadodec-1-yl)phenyl]ethynyl]-2-methyl-5-(1-oxo-2,5,8,11-tetraoxadodec-1-yl)phenyl]ethynyl]-4-methyl-, 2-[2-(2-methoxyethoxy)ethoxy]ethyl ester (9CI) (CA INDEX NAME)

PAGE 1-A

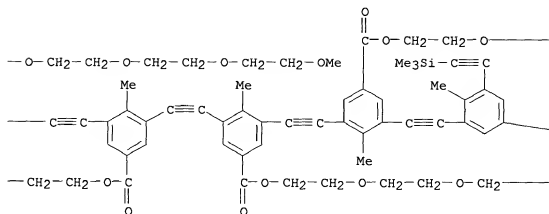




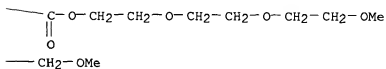
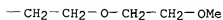
PAGE 1-A



PAGE 1-B



PAGE 1-C



IT 286477-92-7P

KATHLEEN FULLER EIC 1700/PARKER LAW 308-4290

RL: PRP (Properties); SPN (Synthetic preparation); PREP

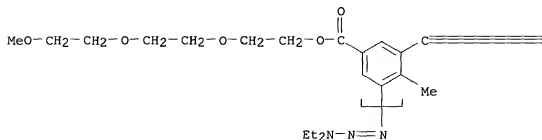
(Preparation)

(intermediate; hexagonal packing of helical oligo(m-phenylene ethynylene)s in solid state induced by Me endo-substitution forming nanotubules)

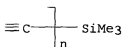
RN 286477-92-7 HCAPLUS

CN Poly[(2-methyl-5-(1-oxo-2,5,8,11-tetraoxadodec-1-yl)-1,3-phenylene)-1,2-ethynediyl], .alpha.-(3,3-diethyl-1-triazenyl)-.omega.-(trimethylsilyl)-(9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L59 ANSWER 9 OF 55 HCAPLUS COPYRIGHT 2003 ACS

AN 2000:191744 HCAPLUS

DN 132:286066

TI Amphiphilic Phenylene-Ethynylene Oligomers in Langmuir-Blodgett Films. Self-Assembling Multilayers for Electroluminescent Devices

AU Arias-Marin, E.; Arnault, J. C.; Guillon, D.; Maillou, T.; Le Moigne, J.; Geffroy, B.; Nunzi, J. M.

CS Institut de Physique et Chimie des Materiaux de Strasbourg, Strasbourg, 67037, Fr.

SO Langmuir (2000), 16(9), 4309-4318

CODEN: LANGD5; ISSN: 0743-7463

PB American Chemical Society

DT Journal

LA English

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 38

AB New rigid amphiphilic mols. based on a p-phenylene-ethynylene unit with hydrophilic side chains were synthesized by a step by step method up to the heptamer. The two most interesting materials, the pentamer and the heptamer, are amphiphilic enough in nature to produce stable Langmuir films on hydrophilic substrates such as hydrophilic glass, ITO, or hydrophilic Si. A transfer ratio of 1, obsd. only by lifting, suggests a 2-type deposited film. The multilayer deposition can be carried out up to 36 layers. The films were analyzed by x-ray reflectivity and are revealed

- as well structured with a layering period of 3.7 nm. This suggests a rearrangement in a Y-type bilayer occurring after transfer deposition from the H<sub>2</sub>O surface. Using AFM, the surfaces of films deposited on glass or Si exhibit steps of 3.6-3.7 nm height or multiples, which are coherent with a self-rearrangement of the single deposited layer to a double layer during the drying process. The heptamer and pentamer show high photoluminescence and large Stokes shifts with emission peaks at 516 and 504 nm LED properties are demonstrated using the ITO/oPEN/LiF/Al sandwich yielding photon emission at 516 nm for the heptamer. The luminescence-voltage characteristics of two diodes using 22 and 36 LB layers show threshold voltage at 4.5 and 6 V resp. and in those conditions the electroluminescence yield is .apprx.10-3%. The electroluminescence in a LB film of mols. aligned parallel to the substrate is interesting because it confirms the possibility of tailoring conduction and emission properties of devices using a layer by layer deposition technique.
- ST phenylene ethynylene **oligomer** Langmuir Blodgett multilayer surface structure; x ray reflectivity photoluminescence electroluminescence phenylene ethynylene **oligomer**; electroluminescent device periodic structure Langmuir Blodgett multilayer
- IT UV and visible spectra (absorption; amphiphilic phenylene-ethynylene **oligomers** in Langmuir-Blodgett films and self-assembling multilayers for electroluminescent devices)
- IT Atomic force microscopy Electroluminescent devices Langmuir-Blodgett multilayers Luminescence, electroluminescence Periodic structures Surface structure X-ray reflectivity spectra (amphiphilic phenylene-ethynylene **oligomers** in Langmuir-Blodgett films and self-assembling multilayers for electroluminescent devices)
- IT **Oligomers**  
RL: DEV (Device component use); PRP (Properties); USES (Uses)  
(amphiphilic phenylene-ethynylene **oligomers** in Langmuir-Blodgett films and self-assembling multilayers for electroluminescent devices)
- IT 263759-27-9P 263759-28-0P 263759-29-1P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(amphiphilic phenylene-ethynylene **oligomers** in Langmuir-Blodgett films and self-assembling multilayers for electroluminescent devices)
- IT 74-88-4, Iodomethane, reactions 75-77-4, Trimethylchlorosilane, reactions 121-44-8, Triethylamine, reactions 429-41-4, Tetrabutylammonium fluoride 603-35-0, Triphenylphosphine, reactions 1611-56-9, 11-Bromo-1-undecanol 3001-72-7 171368-86-8 263759-21-3  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(amphiphilic phenylene-ethynylene **oligomers** in Langmuir-Blodgett films and self-assembling multilayers for electroluminescent devices)
- IT 263759-20-2P 263759-22-4P 263759-23-5P 263759-24-6P 263759-25-7P 263759-26-8P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(amphiphilic phenylene-ethynylene **oligomers** in Langmuir-Blodgett films and self-assembling multilayers for

electroluminescent devices)  
RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE

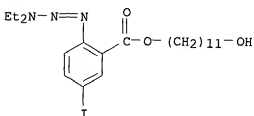
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IT 263759-23-5P 263759-24-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP  
(Preparation); RACT (Reactant or reagent)  
(amphiphilic phenylene-ethynylene oligomers in  
Langmuir-Blodgett films and self-assembling multilayers for  
electroluminescent devices)

RN 263759-23-5 HCAPLUS

CN Benzoic acid, 2-(3,3-diethyl-1-triazenyl)-5-iodo-, 11-hydroxyundecyl ester  
(9CI) (CA INDEX NAME)

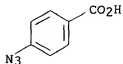


RN 263759-24-6 HCAPLUS

CN Benzoic acid, 2,5-bis[[4-(3,3-diethyl-1-triazenyl)-3-[[[11-



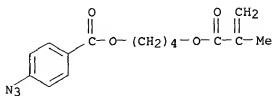
ST chitosan photocrosslinked tissue adhesive  
 IT Adhesives  
 Adhesives  
 (biol. tissue; photocrosslinkable chitosan as a biol. adhesive)  
 IT Crosslinking  
 (photochem.; photocrosslinkable chitosan as a biol. adhesive)  
 IT Medical goods  
 Medical goods  
 (tissue adhesives; photocrosslinkable chitosan as a biol. adhesive)  
 IT 9012-76-4, Chitosan  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)  
 (photocrosslinkable chitosan as a biol. adhesive)  
 IT 96-82-2DP, Lactobionic acid, reaction products with chitosan and chitosan and azidobenzoic acid 110-18-9DP, Temed, reaction products with chitosan and lactobionic acid and azidobenzoic acid **6427-66-3DP**, 4-Azidobenzoic acid, reaction products with chitosan and chitosan and lactobionic acid  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (photocrosslinkable chitosan as a biol. adhesive)  
 RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 RE  
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 IT **6427-66-3DP**, 4-Azidobenzoic acid, reaction products with chitosan and chitosan and lactobionic acid  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (photocrosslinkable chitosan as a biol. adhesive)  
 RN 6427-66-3 HCAPLUS  
 CN Benzoic acid, 4-azido- (9CI) (CA INDEX NAME)



- L59 ANSWER 12 OF 55 HCAPLUS COPYRIGHT 2003 ACS  
 AN 1999:644319 HCAPLUS  
 DN 132:6317  
 TI Photoimmobilization of poly(N-vinylpyrrolidinone) as a means to improve hemocompatibility of polyurethane biomaterials  
 AU Wetzels, Gwendolyn M. R.; Kooze, Leo H.  
 CS Centre for Biomaterials Research, University of Maastricht, Maastricht, 6200 MD, Neth.  
 SO Biomaterials (1999), 20(20), 1879-1887  
 CODEN: BIMADU; ISSN: 0142-9612  
 PB Elsevier Science Ltd.  
 DT Journal  
 LA English  
 CC 63-7 (Pharmaceuticals)  
 Section cross-reference(s): 25, 35  
 AB A novel method to improve the hemocompatibility of polymeric biomaterials (in particular: polyurethane elastomers) is reported. The new approach essentially rests upon photochem. immobilization of the highly biocompatible polymer poly(N-vinylpyrrolidinone) (polyNVP) onto the biomaterial's surface. One of the key steps in the surface modification procedure is the prepn. of a copolymer of NVP and the photoreactive building block 4-[4'-azidobenzoyl]-oxo-n-butylmethacrylate (I). This copolymer is first dissolved in a volatile solvent, then sprayed onto the biomaterial's surface, and subsequently immobilized via irradiation with UV light. The paper describes: (i) prepn. of I, (ii) prepn. of the copolymer (NVP + I), (iii) physico-chem. characterization of the modified surfaces, and (iv) results of two in vitro hemocompatibility assays (i.e. thrombin generation and adhesion of blood platelets from recalcified human platelet-rich plasma). Furthermore, the surface modification was performed with a microporous polyurethane vascular graft (Chronoflex), which is already in clin. use. The in vitro expts. revealed that significant improvement of the hemocompatibility of polyurethanes can be achieved through this method.  
 ST polyurethane vascular graft hemocompatibility photoimmobilization; PVP photoimmobilization polyurethane vascular graft hemocompatibility  
 IT Blood vessel  
 (artificial; photoimmobilization of poly(N-vinylpyrrolidinone) as a means to improve hemocompatibility of polyurethane biomaterials)  
 IT Biocompatibility  
 Immobilization, biochemical  
 Prosthetic materials and Prosthetics  
 (photoimmobilization of poly(N-vinylpyrrolidinone) as a means to improve hemocompatibility of polyurethane biomaterials)  
 IT Urethane rubber, biological studies  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
 (photoimmobilization of poly(N-vinylpyrrolidinone) as a means to improve hemocompatibility of polyurethane biomaterials)  
 IT 251325-47-OP  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties);

- SPN (Synthetic preparation)**; THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; PROC (Process); USES (Uses)
- (photoimmobilization of poly(N-vinylpyrrolidinone) as a means to improve hemocompatibility of polyurethane biomaterials)
- IT 110-63-4, 1,4-Butanediol, reactions 150-13-0, 4-Aminobenzoic acid 920-46-7, Methacryloyl chloride 6427-66-3, 4-Azidobenzoic acid
- RL: RCT (Reactant); RACT (Reactant or reagent)
- (photoimmobilization of poly(N-vinylpyrrolidinone) as a means to improve hemocompatibility of polyurethane biomaterials)
- IT 14848-01-2P, 4-Azidobenzoyl chloride 251325-45-8P 251325-46-9P
- RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
- (photoimmobilization of poly(N-vinylpyrrolidinone) as a means to improve hemocompatibility of polyurethane biomaterials)
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- IT 251325-47-0P
- RL: PEP (Physical, engineering or chemical process); PRP (Properties); **SPN (Synthetic preparation)**; THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; PROC (Process); USES (Uses)
- (photoimmobilization of poly(N-vinylpyrrolidinone) as a means to improve hemocompatibility of polyurethane biomaterials)
- RN 251325-47-0 HCAPLUS
- CN Benzoic acid, 4-azido-, 4-[(2-methyl-1-oxo-2-propenyl)oxy]butyl ester, polymer with 1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)

CM 1

CRN 251325-45-8  
CMF C15 H17 N3 O4

CM 2

CRN 88-12-0  
CMF C6 H9 N O

- L59 ANSWER 13 OF 55 HCAPLUS COPYRIGHT 2003 ACS  
 AN 1999:563023 HCAPLUS  
 DN 131:351360  
 TI Synthesis of new arylcarboranes as precursors for oligomers  
 AU Forster, B.; Bertran, J.; Teixidor, F.; Vinas, C.  
 CS Institut de Ciencia de Materials de Barcelona, Campus UAB, CSIC, Bellaterra, E-08193, Spain  
 SO Journal of Organometallic Chemistry (1999), 587(1), 67-73  
 CODEN: JORCAI; ISSN: 0022-328X  
 PB Elsevier Science S.A.  
 DT Journal  
 LA English  
 CC 29-4 (Organometallic and Organometalloidal Compounds)  
 OS CASREACT 131:351360  
 AB Some new aryl o-carboranes have been synthesized. From Me 3-iodo-5-(trimethylsilylethynyl)benzoate (1) or Bu 3-(3,3-diethyltriazeno)-5-ethynylbenzoate (2), 5-ethynyl-3-iodo-benzoates were obtained, which after the reaction with the decaborane-acetonitrile complex led to the corresponding 5-(1'-(1',2'-dicarba-closo-dodecaboranyl))-3-iodo-benzoates. Furthermore, the Me 3-iodo-5-(trimethylsilyl-ethynyl)-benzoate (1) is the starting material for the synthesis of a bis-carborane. Compd. 1 is modified to the Me 3,5-bis(trimethylsilyl-ethynyl)-benzoate, which is deprotected to give the Me 3,5-bis(ethynyl)-benzoate (6). Compd. 6 reacted with the decaborane-acetonitrile complex to the Me 3,5-bis(1'-(1',2'-dicarba-closo-dodecaboranyl))-benzoate, which was partially degraded to the bis(tetramethylammonium)-3,5-bis(7'-(7',8'-dicarba-nido-undecaboranyl))methoxycarbonylphenyl.  
 ST aryl carborane precursor oligomer; silyl ethynyl benzoate prepn reaction decaborane acetonitrile complex

- IT Boranes  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(arylcaboranes; synthesis of new arylcaboranes as precursors for  
**oligomers**)
- IT 247234-88-4  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(desilylation of)
- IT 250288-93-8P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(prepn. and desilylation of)
- IT **152266-50-7P**  
RL: RCT (Reactant); **SPN (Synthetic preparation); PREP**  
**(Preparation)**; RACT (Reactant or reagent)  
(prepn. and iodination of)
- IT 250288-91-6P 250288-94-9P 250288-96-1P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(prepn. and reaction with decaborane acetonitrile complex)
- IT 250288-92-7P 250288-95-0P 250288-97-2P 250639-46-4P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)
- IT 1066-54-2, Trimethylsilylacetylene  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction with silylethynyl benzoate)
- IT 17702-41-9, Decaborane  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(synthesis of new arylcaboranes as precursors for **oligomers**)
- RE.CNT 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE
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- helical structures formed in acetonitrile. Using solvent demonstration methods, the amt. of destabilization incurred when the binaphthol is positioned in the middle of the chain is estd. to be 3-5 kcal/mol. The extent to which the binaphthol biases the twist sense of the helix, however, is significantly greater when positioned in the center of the **oligomer** chain.
- ST solvophobically folded phenylene ethynylene **oligomer**
- IT Circular dichroism  
(helical bias in solvophobically folded oligo(phenylene ethynylene)s)
- IT Chemical chains  
(helical; helical bias in solvophobically folded oligo(phenylene ethynylene)s)
- IT Polyacetylenes, properties  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(**oligomeric**, binaphthol derivs.; helical bias in solvophobically folded oligo(phenylene ethynylene)s)
- IT 223519-58-2DP, reaction products with binaphthol derivs. 223519-60-6P  
223519-61-7DP, reaction products with phenylene ethynylene **oligomers** 223519-61-7P 223519-62-8P 223668-69-7P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(helical bias in solvophobically folded oligo(phenylene ethynylene)s)
- IT 223519-25-3P 223519-29-7P 223519-31-1P 223519-34-4P  
223519-36-6P 223519-39-9P 223519-41-3P 223519-43-5P  
223519-45-7P 223519-47-9P 223519-49-1P 223519-51-5P  
223519-53-7P 223519-55-9P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(helical bias in solvophobically folded oligo(phenylene ethynylene)s)
- IT 112-35-6P, Triethylene glycol monomethyl ether 602-09-5P,  
1,1'-Binaphthyl-2,2'-diol 1066-54-2P, Trimethylsilylacetylene  
13185-00-7P 34545-20-5P 223519-08-2P 223519-11-7P  
223519-12-8P 223519-14-0P 223519-15-1P  
223519-17-3P 223519-19-5P 223519-21-9P 223519-23-1P  
223519-27-5P 223519-58-2P 223519-59-3P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(starting materials; helical bias in solvophobically folded oligo(phenylene ethynylene)s)
- RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD
- RE
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IT 223519-25-3P 223519-31-1P 223519-36-6P

223519-43-5P 223519-45-7P

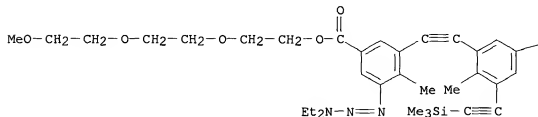
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(helical bias in solvophobic folded oligo(phenylene ethynylene)s)

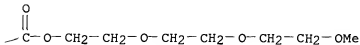
RN 223519-25-3 HCAPLUS

CN Benzoic acid, 3-(3,3-diethyl-1-triazenyl)-4-methyl-5-[[2-methyl-5-(1-oxo-2,5,8,11-tetraoxadodec-1-yl)-3-[(trimethylsilyl)ethynyl]phenyl]ethynyl]-, 2-[2-(2-methoxyethoxy)ethoxy]ethyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



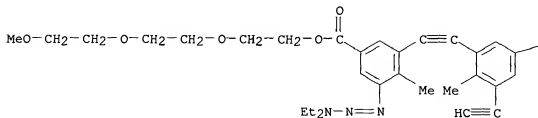
PAGE 1-B



RN 223519-31-1 HCAPLUS

CN Benzoic acid, 3-(3,3-diethyl-1-triazenyl)-5-[[3-ethynyl-2-methyl-5-(1-oxo-2,5,8,11-tetraoxadodec-1-yl)phenyl]ethynyl]-4-methyl-, 2-[2-(2-methoxyethoxy)ethoxy]ethyl ester (9CI) (CA INDEX NAME)

PAGE 1-A

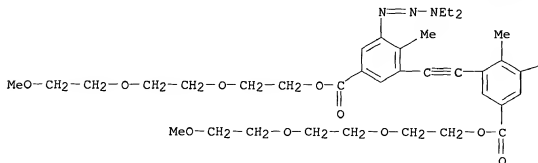




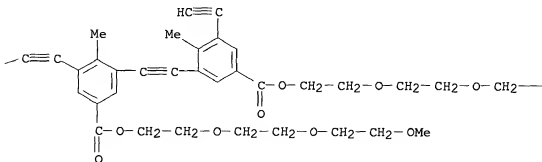


CN Benzoic acid, 3-[[3-(3,3-diethyl-1-triazenyl)-2-methyl-5-(1-oxo-2,5,8,11-tetraoxadodec-1-yl)phenyl]ethynyl]-5-[[3-[[3-ethynyl-2-methyl-5-(1-oxo-2,5,8,11-tetraoxadodec-1-yl)phenyl]ethynyl]-2-methyl-5-(1-oxo-2,5,8,11-tetraoxadodec-1-yl)phenyl]ethynyl]-4-methyl-, 2-[2-(2-methoxyethoxy)ethoxy]ethyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



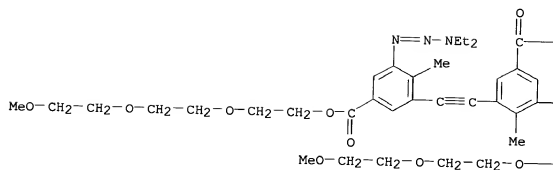
PAGE 1-C

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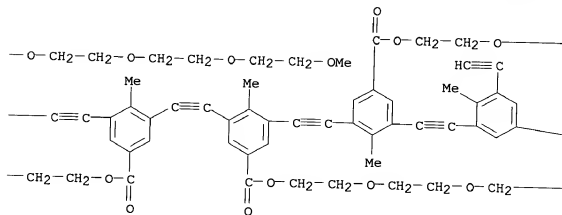
RN 223519-45-7 HCAPLUS

CN Benzoic acid, 3-[[3-[[3-(3,3-diethyl-1-triazenyl)-2-methyl-5-(1-oxo-2,5,8,11-tetraoxadodec-1-yl)phenyl]ethynyl]-2-methyl-5-(1-oxo-2,5,8,11-tetraoxadodec-1-yl)phenyl]ethynyl]-5-[[3-[[3-[[3-ethynyl-2-methyl-5-(1-oxo-2,5,8,11-tetraoxadodec-1-yl)phenyl]ethynyl]-2-methyl-5-(1-oxo-2,5,8,11-tetraoxadodec-1-yl)phenyl]ethynyl]-2-methyl-5-(1-oxo-2,5,8,11-tetraoxadodec-1-yl)phenyl]ethynyl]-4-methyl-, 2-[2-(2-methoxyethoxy)ethoxy]ethyl ester (9CI) (CA INDEX NAME)

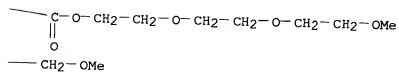
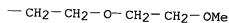
PAGE 1-A



PAGE 1-B



PAGE 1-C



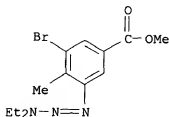
IT 223519-12-8P 223519-14-0P 223519-17-3P  
 223519-21-9P

KATHLEEN FULLER EIC 1700/PARKER LAW 308-4290

RL: RCT (Reactant); **SPN (Synthetic preparation)**; **PREP (Preparation)**; RACT (Reactant or reagent)  
(starting materials; helical bias in solvophobic folded  
oligo(phenylene ethynylene)s)

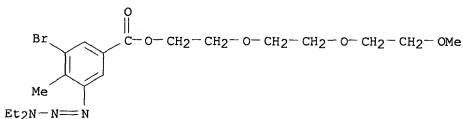
RN 223519-12-8 HCAPLUS

CN Benzoic acid, 3-bromo-5-(3,3-diethyl-1-triazenyl)-4-methyl-, methyl ester (9CI) (CA INDEX NAME)



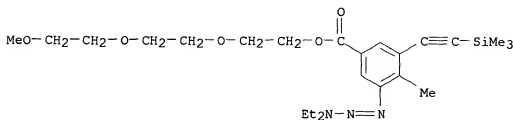
RN 223519-14-0 HCAPLUS

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RN 223519-17-3 HCAPLUS

CN Benzoic acid, 3-(3,3-diethyl-1-triazenyl)-4-methyl-5-[(trimethylsilyl)ethynyl]-, 2-[2-(2-methoxyethoxy)ethoxy]ethyl ester (9CI) (CA INDEX NAME)



RN 223519-21-9 HCAPLUS

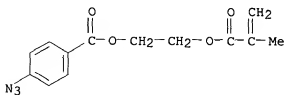
CN Benzoic acid, 3-(3,3-diethyl-1-triazenyl)-5-ethynyl-4-methyl-, 2-[2-(2-methoxyethoxy)ethoxy]ethyl ester (9CI) (CA INDEX NAME)

- butyl methacrylate polymn fullerene contg
- IT Polymerization  
Polymerization catalysts  
(anionic; synthesis, mol. wt., compn., and NMR spectra of t-Bu methacrylate copolymers with methacrylates having fullerene with AIBN or PhMgBr initiators)
- IT Polymerization  
Polymerization catalysts  
(radical; synthesis, mol. wt., compn., and NMR spectra of t-Bu methacrylate copolymers with methacrylates having fullerene with AIBN or PhMgBr initiators)
- IT NMR (nuclear magnetic resonance)  
Polymer chains  
(synthesis, mol. wt., compn., and NMR spectra of t-Bu methacrylate copolymers with methacrylates having fullerene with AIBN or PhMgBr initiators)
- IT 13092-57-4P, 6-Hydroxyhexyl methacrylate  
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(in synthesis of methacrylates having fullerene)
- IT 629-11-8, 1,6-Hexanediol 868-77-9 920-46-7, Methacryloyl chloride 6427-66-3, 4-Azidobenzoic acid 7719-09-7, Thionyl chloride  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(in synthesis of methacrylates having fullerene)
- IT 14848-01-2P, 4-Azidobenzoyl chloride  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(in synthesis of methacrylates having fullerene)
- IT 55025-80-4P 219493-41-1P 219493-42-2P 219493-43-3P  
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(synthesis and polymn. of methacrylates having fullerene)
- IT 99685-96-8, Fullerene  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(synthesis and polymn. of methacrylates having fullerene)
- IT 78-67-1, AIBN 100-58-3  
RL: CAT (Catalyst use); USES (Uses)  
(synthesis, mol. wt., compn., and NMR spectra of t-Bu methacrylate copolymers with methacrylates having fullerene with AIBN or PhMgBr initiators)
- IT 219493-44-4P 219493-45-5P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(synthesis, mol. wt., compn., and NMR spectra of t-Bu methacrylate copolymers with methacrylates having fullerene with AIBN or PhMgBr initiators)

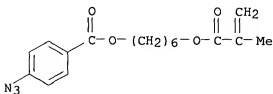
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 IT 55025-80-4P 219493-41-1P  
 RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation)  
 ; PREP (Preparation); RACT (Reactant or reagent)  
 (synthesis and polymn. of methacrylates having fullerene)  
 RN 55025-80-4 HCAPLUS  
 CN Benzoic acid, 4-azido-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester  
 (9CI) (CA INDEX NAME)



- RN 219493-41-1 HCAPLUS  
 CN Benzoic acid, 4-azido-, 6-[(2-methyl-1-oxo-2-propenyl)oxy]hexyl ester  
 (9CI) (CA INDEX NAME)



- L59 ANSWER 18 OF 55 HCAPLUS COPYRIGHT 2003 ACS  
 AN 1998:719077 HCAPLUS  
 DN 129:347325  
 TI Methods for functionalizing and coating substrates and devices made according to the methods  
 IN Yan, Mingdi; Keana, John F. W.; Karapetrov, Goran; Sevrain, Christopher J. P.; Wybourn, Martin N.

PA The State of Oregon Acting by and Through the State Board of Higher  
 Educatio, USA  
 SO U.S., 43 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 IC ICM B05D007-14  
 ICS B05D003-06; B05D003-10  
 NCL 427551000  
 CC 63-7 (Pharmaceuticals)  
 Section cross-reference(s): 42

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5830539	A	19981103	US 1995-565199	19951117
PRAI	US 1995-565199		19951117		

AB At least a portion of a substrate is coated with a monolayer of a coating, which prior to coating satisfied the formula  $Y-R-Si(OR')nX_{3-n}$  (where  $n = 0-3$ ;  $R =$  arom. group or  $Cl-20$  alkyl;  $R' = Cl-10$  alkyl;  $X =$  halogen;  $Y$  is selected from  $H, OH, NH_2$ , and  $SH$ ); the coated substrate is reacted with a perhalophenyl azide to give coated substrates having perhalophenyl azides attached to it. The coating materials can be crosslinked and coated onto a substrate. Alternatively, the coating materials may be covalently bonded to the substrates. The coating materials might themselves functionalize the substrate, or provide a biocompatible coating on the substrate. The coating materials might also include electrophilic or nucleophilic groups that allow for the subsequent reaction of the coating materials with addnl. reagents. The coated substrates may be implantable medical devices or medical devices which come in contact with tissue or blood. These coatings on the devices have 2 layers. The first layer comprises a mol. tether covalently bonded to the surface. The second layer is bonded to the article by the first layer and comprises a bioactive agent selected from the group consisting of biocompatible polymers, antibiotics, antimicrobials and anticoagulants.

ST coating medical device perhalophenyl azide; functionalization coating perhalophenyl azide; nitrene functionalized coating medical device

IT Medical goods  
 (angioplasty balloons, coatings for; prepn. and biofunctionalization of nitrene-functionalized coatings for medical devices)

IT Artery  
 (angioplasty, balloons, coatings for; prepn. and biofunctionalization of nitrene-functionalized coatings for medical devices)

IT Crosslinking agents  
 (for biopolymers via nitrene-functionalized coatings for medical devices)

IT Polyurethanes, biological studies  
 RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
 (functionalization of coatings on angioplasty balloons; prepn. and biofunctionalization of nitrene-functionalized coatings for medical devices)

IT Oligonucleotides  
 RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
 (functionalization of coatings with; prepn. and biofunctionalization of nitrene-functionalized coatings for medical devices)

IT Prosthetic materials and Prosthetics  
 (implants; prepn. and biofunctionalization of nitrene-functionalized

- coatings for medical devices)
- IT Photolysis  
(in prepn. of micron-size patterned nitrene-functionalized coatings for medical devices)
- IT Photolithography  
(micron-size patterned nitrene-functionalized coatings for medical devices)
- IT Cell  
Coating materials  
(prepn. and biofunctionalization of nitrene-functionalized coatings for medical devices)
- IT Antibodies  
Nucleotides, biological studies  
Peptides, biological studies  
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
(prepn. and biofunctionalization of nitrene-functionalized coatings for medical devices)
- IT Animal tissue  
Blood  
(prepn. and biofunctionalization of nitrene-functionalized coatings for medical devices in contact with)
- IT Coating process  
(spin; prepn. and biofunctionalization of nitrene-functionalized coatings for medical devices)
- IT Glass, biological studies  
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
(substrate; prepn. and biofunctionalization of nitrene-functionalized coatings for medical devices)
- IT 126695-58-7  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(functionalizing agent for polymer coatings; nitrene-functionalized coatings for medical devices)
- IT 145708-89-0P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(functionalizing agent for polymer coatings; nitrene-functionalized coatings for medical devices)
- IT 9003-99-ODP, Peroxidase, reaction products with functionalized coatings  
RL: BUU (Biological use, unclassified); DEV (Device component use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(horseradish; nitrene-functionalized coatings for medical devices)
- IT 154438-64-9P 154438-65-0P 154438-66-1P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(intermediate; prepn. and biofunctionalization of nitrene-functionalized coatings for medical devices)
- IT 115416-38-1DP, N-(5-Aminopentyl)biotinamide, reaction products with functionalized coatings  
RL: BUU (Biological use, unclassified); DEV (Device component use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(micro-patterned; nitrene-functionalized coatings for medical devices)
- IT 9003-53-6DP, Polystyrene, reaction products with perhalophenyl azide derivs. 104934-51-2DP, Poly(3-octylthiophene), reaction products with

perhalophenyl azide derivs. 126695-58-7DP, reaction products with polymers and graphite 145708-89-ODP, reaction products with polymers

RL: BUU (Biological use, unclassified); DEV (Device component use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(nitrene-functionalized coatings for medical devices)

IT 9003-07-OD, Polypropylene, reaction products with perhalophenyl azide derivs.

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(prepn. and biofunctionalization of nitrene-functionalized coatings for medical devices)

IT 154438-63-8P

RL: DEV (Device component use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. and biofunctionalization of nitrene-functionalized coatings for medical devices)

IT 158277-52-2P, N-4-Azido-2,3,5,6-tetrafluorobenzyl biotinamide

158277-53-3P

RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(prepn. and biofunctionalization of nitrene-functionalized coatings for medical devices)

IT 9003-53-6, Polystyrene

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction with perhalophenyl azides; nitrene-functionalized coatings for medical devices)

IT 660-88-8, 5-Aminopentanoic acid 6066-82-6, N-Hydroxysuccinimide

122590-77-6, 4-Azido-2,3,5,6-tetrafluorobenzoic acid

RL: RCT (Reactant); RACT (Reactant or reagent)

(starting material for functionalizing agent; nitrene-functionalized coatings for medical devices)

IT 459-73-4, Glycine ethyl ester 35013-72-0 122590-78-7 126695-61-2, 4-Azido-2,3,5,6-tetrafluorobenzylamine 215448-02-5

RL: RCT (Reactant); RACT (Reactant or reagent)

(starting material; prepn. and biofunctionalization of nitrene-functionalized coatings for medical devices)

IT 7440-21-3, Silicon, biological studies 7782-42-5, Graphite, biological studies

RL: BUU (Biological use, unclassified); DEV (Device component use); BIOL (Biological study); USES (Uses)

(substrate; nitrene-functionalized coatings for medical devices)

IT 1303-00-0, Gallium arsenide (GaAs), biological studies 1306-23-6, Cadmium sulfide (CdS), biological studies 7429-90-5, Aluminum, biological studies 7440-06-4, Platinum, biological studies 7440-22-4, Silver, biological studies 7440-50-8, Copper, biological studies 7440-57-5, Gold, biological studies

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(substrate; prepn. and biofunctionalization of nitrene-functionalized coatings for medical devices)

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IT 145708-89-OP

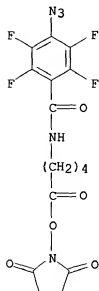
RL: RCT (Reactant); SPN (Synthetic preparation); PREP

(Preparation); RACT (Reactant or reagent)

(functionalizing agent for polymer coatings; nitrene-functionalized  
coatings for medical devices)

RN 145708-89-0 HCAPLUS

CN Benzamide, 4-azido-N-[5-[(2,5-dioxo-1-pyrrolidinyl)oxy]-5-oxopentyl]-  
2,3,5,6-tetrafluoro- (9CI) (CA INDEX NAME)



IT 154438-64-9P 154438-65-0P 154438-66-1P

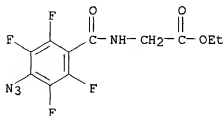
RL: RCT (Reactant); SPN (Synthetic preparation); PREP

(Preparation); RACT (Reactant or reagent)

(intermediate; prepn. and biofunctionalization of nitrene-functionalized coatings for medical devices)

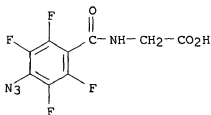
RN 154438-64-9 HCAPLUS

CN Glycine, N-(4-azido-2,3,5,6-tetrafluorobenzoyl)-, ethyl ester (9CI) (CA INDEX NAME)



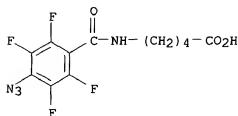
RN 154438-65-0 HCAPLUS

CN Glycine, N-(4-azido-2,3,5,6-tetrafluorobenzoyl)- (9CI) (CA INDEX NAME)



RN 154438-66-1 HCAPLUS

CN Pentanoic acid, 5-[(4-azido-2,3,5,6-tetrafluorobenzoyl)amino]- (9CI) (CA INDEX NAME)

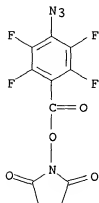


IT 126695-58-7DP, reaction products with polymers and graphite 145708-89-ODP, reaction products with polymers

RL: BUU (Biological use, unclassified); DEV (Device component use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (nitrene-functionalized coatings for medical devices)

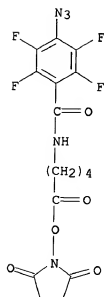
RN 126695-58-7 HCAPLUS

CN 2,5-Pyrrolidinedione, 1-[(4-azido-2,3,5,6-tetrafluorobenzoyl)oxy]- (9CI) (CA INDEX NAME)



RN 145708-89-0 HCAPLUS

CN Benzamide, 4-azido-N-[5-[(2,5-dioxo-1-pyrrolidinyl)oxy]-5-oxopentyl]-2,3,5,6-tetrafluoro- (9CI) (CA INDEX NAME)



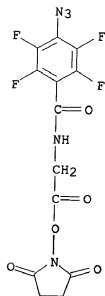
IT **154438-63-8P**

RL: DEV (Device component use); **SPN (Synthetic preparation)**; THU  
(Therapeutic use); BIOL (Biological study); **PREP (Preparation)**;  
USES (Uses)

(prepn. and biofunctionalization of nitrene-functionalized coatings for  
medical devices)

RN 154438-63-8 HCAPLUS

CN Benzamide, 4-azido-N-[2-[(2,5-dioxo-1-pyrrolidinyl)oxy]-2-oxoethyl]-  
2,3,5,6-tetrafluoro- (9CI) (CA INDEX NAME)



L59 ANSWER 19 OF 55 HCAPLUS COPYRIGHT 2003 ACS

KATHLEEN FULLER EIC 1700/PARKER LAW 308-4290

AN 1998:531862 HCAPLUS  
 DN 129:276454  
 TI Template **oligomerization** for the replication of  
 precisely-defined synthetic macromolecules  
 AU Shortell, David B.; Tour, James M.  
 CS Department of Chemistry and Biochemistry, University of South Carolina,  
 Columbia, SC, 29208, USA  
 SO Polymer Preprints (American Chemical Society, Division of Polymer  
 Chemistry) (1998), 39(2), 527-528  
 CODEN: ACPPAY; ISSN: 0032-3934  
 PB American Chemical Society, Division of Polymer Chemistry  
 DT Journal  
 LA English  
 CC 35-7 (Chemistry of Synthetic High Polymers)  
 AB A new route is described for the facile construction of org.  
**oligomers** of precise mol. wt. and constitution using templates of  
 specific length, constitution, and conformation. Taking advantage of  
 precisely-defined synthetic templates that are rigid-rod **oligomers**  
 , the rapid construction of **oligomers** of the same length as the  
 templates will be attempted. Monomers will be attached to the templates  
 via covalent bonds, then **oligomerization** will be chem. induced  
 to afford a supramol. parent-daughter duplex. The  
**oligomerizations** should be kinetically favored since the templated  
 reaction is pseudo-solid state or pseudo-topochem. in its monomer-monomer  
 orientations. Cleavage of the parent-daughter duplex would afford a  
 daughter **oligomer** that retains the specific length information  
 of the parent template. This project could significantly simplify the  
 prepn. of precisely defined macromol. architectures. Prepn. of a  
 polyacetylene by the template route is shown.  
 ST template **oligomerization** precise replication synthetic macromol;  
 polyacetylene prepn template **oligomerization** route  
 IT Ladder polymers  
 Ladder polymers  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (semi-, polyacetylenes; template **oligomerization** for the  
 replication of precisely-defined synthetic macromols.)  
 IT Polyacetylenes, preparation  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (semiladder; template **oligomerization** for the replication of  
 precisely-defined synthetic macromols.)  
 IT Polyacetylenes, preparation  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (template **oligomerization** for the replication of  
 precisely-defined synthetic macromols.)  
 IT Polymerization  
 (template; template **oligomerization** for the replication of  
 precisely-defined synthetic macromols.)  
 IT 213700-01-7P 213700-02-8P 213700-04-0P 213700-18-6P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (monomer; template **oligomerization** for the replication of  
 precisely-defined synthetic macromols.)  
 IT 74-86-2, Acetylene, reactions 74-88-4, Methyl iodide, reactions  
 109-63-7, Trifluoroboron etherate 109-72-8, n-Butyllithium, reactions  
 118-92-3, 2-Aminobenzoic acid 624-38-4, 1,4-Diiodobenzene 1461-22-9,  
 Tributyltin chloride

RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reactant in monomer prepn.; template **oligomerization** for the  
 replication of precisely-defined synthetic macromols.)

IT 1571-86-4P, 1,4-Dibutylbenzene 5326-47-6P 169786-32-7P  
 171368-86-8P 213700-06-2P 213700-10-8P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP  
 (Preparation); RACT (Reactant or reagent)  
 (reactant in monomer prepn.; template **oligomerization** for the  
 replication of precisely-defined synthetic macromols.)

IT 213700-12-0P 213700-20-0P 213779-06-7P 213779-07-8P 213779-08-9P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (template **oligomerization** for the replication of  
 precisely-defined synthetic macromols.)

IT 213779-07-8DP, hydrolyzed  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (template **oligomerization** for the replication of  
 precisely-defined synthetic macromols.)

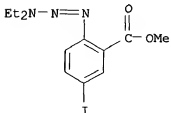
RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 RE

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IT 169786-32-7P 171368-86-8P 213700-10-8P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP  
 (Preparation); RACT (Reactant or reagent)  
 (reactant in monomer prepn.; template **oligomerization** for the  
 replication of precisely-defined synthetic macromols.)

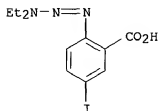
RN 169786-32-7 HCAPLUS

CN Benzoic acid, 2-(3,3-diethyl-1-triazenyl)-5-iodo-, methyl ester (9CI) (CA  
 INDEX NAME)



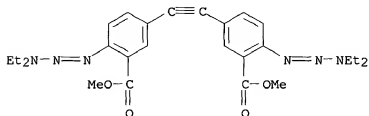
RN 171368-86-8 HCAPLUS

CN Benzoic acid, 2-(3,3-diethyl-1-triazenyl)-5-iodo- (9CI) (CA INDEX NAME)



RN 213700-10-8 HCAPLUS

CN Benzoic acid, 3,3'-(1,2-ethynediyl)bis[6-(3,3-diethyl-1-triazenyl)-, dimethyl ester (9CI) (CA INDEX NAME)



L59 ANSWER 20 OF 55 HCAPLUS COPYRIGHT 2003 ACS

AN 1998:352904 HCAPLUS

DN 129:42356

TI Method for coating substrates

IN Yan, Mingdi

PA Ikonos Corp., USA

SO PCT Int. Appl., 122 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C09D

CC 42-2 (Coatings, Inks, and Related Products)

Section cross-reference(s): 57, 63

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9822541	A2	19980528	WO 1997-US20389	19971107
WO 9822541	A3	19981217		
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
AU 9851735	A1	19980610	AU 1998-51735	19971107
PRAI US 1996-30712P	P	19961108		
WO 1997-US20389	W	19971107		

- AB Methods for coating substrates such as Si-contg. substrates to potentiate biocompatibility of the substrate are described. The methods comprise coating at least a portion of a substrate with particular coating materials such as polyolefins. Materials can be crosslinked and coated onto a substrate. Alternatively, the coating materials may be covalently bonded to the substrates. The coating materials might functionalize the substrate or provide a biocompatible coating thereon. The coating materials might also include electrophilic or nucleophilic groups that allow for the subsequent reaction of the coating materials with addnl. reagents. The present invention also provides coated workpieces that contact tissue or blood. The workpieces may be coated with a first and second layer. The first layer comprises a mol. tether covalently bonded to the surface. The second layer is bonded to the article by the first layer and comprises a bioactive agent. The present invention also provides for potentiating biocompatibility of workpieces by coating the workpieces with a non-crosslinked polymeric film that is applied to the substrate surface and is neither crosslinked nor covalently bonded thereto. Addnl., the present invention provides for multiple layering of substrates with crosslinked, non-crosslinked, covalently bonded, or non-covalently bonded polymeric films. Optionally, silanes are used as coupling agents between the substrates and the polymer coatings, and optionally, primers are used that contg. polymers having groups that react with a nitrene and a reagent having .gtoreq.2 nitrogenous groups, which are exposed to an energy source to cause a reaction the formation of the nitrene.
- ST polyolefin coating silicon contg substrate; bioactive coating silicon contg substrate; polymer primer nitrogenous compd; silane coupling agent polyolefin coating; biocompatible coating silicon contg substrate
- IT Polyesters, uses  
RL: DEV (Device component use); USES (Uses)  
(angioplasty balloons, coating substrates; coating and(or) functionalizing substrates using compds. contg. azide and functional groups)
- IT Artery  
(angioplasty, balloons, coating substrates; coating and(or) functionalizing substrates using compds. contg. azide and functional groups)
- IT Balloons  
(angioplasty, coating substrates; coating and(or) functionalizing substrates using compds. contg. azide and functional groups)
- IT Glass, miscellaneous  
RL: MSC (Miscellaneous)  
(coating substrate,; coating and(or) functionalizing substrates using compds. contg. azide and functional groups)
- IT Polyurethanes, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(coating; coating and(or) functionalizing substrates using compds. contg. azide and functional groups)
- IT Crosslinking  
Electron beam lithography  
(crosslinking of films of contg. polystyrene and hydroxysuccinimide-functionalized perfluorophenyl azides by electron-beam lithog.)
- IT Photolithography  
(of films of polystyrene reacted with hydroxysuccinimide-functionalized perfluorophenyl azides)
- IT Immobilization, biochemical  
(of horseradish peroxidase on films of polystyrene reacted with hydroxysuccinimide-functionalized perfluorophenyl azides)



IT Oligonucleotides  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (reaction products, with hydroxysuccinimide-functionalized  
 perfluorophenyl azides, coatings; coating and(or) functionalizing  
 substrates using compds. contg. azide and functional groups)

IT Coupling agents  
 (silanes and adducts of polymers and compds. contg. azide and  
 functional groups; spin coating silicon wafers with polyolefins)

IT Silanes  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (spin coating silicon wafers with polyolefins)

IT Polyolefins  
 RL: PEP (Physical, engineering or chemical process); PROC (Process)  
 (spin coating silicon wafers with polyolefins)

IT Coating process  
 (spin; spin coating silicon wafers with polyolefins)

IT 25038-59-9, PET polymer, uses  
 RL: DEV (Device component use); USES (Uses)  
 (angioplasty balloons, coating substrates; coating and(or)  
 functionalizing substrates using compds. contg. azide and functional  
 groups)

IT 143-10-2DP, 1-Decanethiol, reaction products with metals, compds. contg.  
 azide and functional groups, and oligonucleotides 334-48-5DP, Decanoic  
 acid, reaction products with metals, compds. contg. azide and functional  
 groups, and oligonucleotides 1303-00-ODP, Gallium arsenide, reaction  
 products with decanethiol, compds. contg. azide and functional groups, and  
 oligonucleotides 1306-23-6DP, Cadmium sulfide, reaction products with  
 decanethiol, compds. contg. azide and functional groups, and  
 oligonucleotides 2690-08-6DP, Octyl sulfide, reaction products with  
 metals, compds. contg. azide and functional groups, and oligonucleotides  
 7429-90-5DP, Aluminum, reaction products with decanoic acid, compds.  
 contg. azide and functional groups, and oligonucleotides, preparation  
 7440-06-4DP, Platinum, reaction products with decanethiol, compds. contg.  
 azide and functional groups, and oligonucleotides, preparation  
 7440-22-4DP, Silver, reaction products with decanethiol, compds. contg.  
 azide and functional groups, and oligonucleotides, preparation  
 7440-50-8DP, Copper, reaction products with decanethiol, compds. contg.  
 azide and functional groups, and oligonucleotides, preparation  
 9003-07-ODP, Polypropylene, reaction products with adducts of gold,  
 mercaptodecylamine and compds. contg. azide and functional groups  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (coated substrate; coating and(or) functionalizing substrates using  
 compds. contg. azide and functional groups)

IT 112-04-9, Octadecyltrichlorosilane 13822-56-5  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (coating coupling agent; coating and(or) functionalizing substrates  
 using compds. contg. azide and functional groups)

IT 7429-90-5, Aluminum, miscellaneous 14808-60-7, Quartz, miscellaneous  
 RL: MSC (Miscellaneous)  
 (coating substrate,; coating and(or) functionalizing substrates using  
 compds. contg. azide and functional groups)

IT 208397-95-9P  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (crosslinked coating; coating and(or) functionalizing substrates using  
 compds. contg. azide and functional groups)

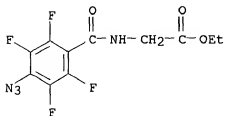
IT 154438-64-9P 154438-65-0P  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP  
 (Preparation); RACT (Reactant or reagent)

- (functionalization agent precursor; coating and(or) functionalizing substrates using compds. contg. azide and functional groups)
- IT 623-33-6, Glycine ethyl ester hydrochloride 660-88-8, 5-Aminopentanoic acid 6066-82-6, N-Hydroxysuccinimide 35013-72-0, N-Succinimidyl-D-biotin 72040-63-2 122590-77-6 122590-78-7 126695-61-2, 4-Azido-2,3,5,6-tetrafluorobenzylamine 154438-66-1
- RL: RCT (Reactant); RACT (Reactant or reagent)
- (functionalization agent precursor; coating and(or) functionalizing substrates using compds. contg. azide and functional groups)
- IT 154438-63-8P 158277-52-2P 158277-53-3P
- RL: IMF (Industrial manufacture); PREP (Preparation)
- (functionalization agent; coating and(or) functionalizing substrates using compds. contg. azide and functional groups)
- IT 944-43-4, 4-Aminotetrafluorobenzoic acid
- RL: RCT (Reactant); RACT (Reactant or reagent)
- (functionalized substrate model precursor; coating and(or) functionalizing substrates using compds. contg. azide and functional groups)
- IT 126695-58-7P 142039-22-3P
- RL: IMF (Industrial manufacture); PREP (Preparation)
- (functionalized substrate model; coating and(or) functionalizing substrates using compds. contg. azide and functional groups)
- IT 874-60-2DP, p-Toluoyl chloride, reaction products with aminosilanes coupling agents and hydroxysuccinimide-functionalized perfluorophenyl azides 7782-42-5DP, Graphite, reaction products with compds. contg. azide and functional groups, preparation 9003-53-6DP, Polystyrene, reaction products with compds. contg. azide and functional groups 104934-51-2DP, Poly(3-octylthiophene), reaction products with compds. contg. azide and functional groups 126695-58-7DP, reaction products with polystyrene 136091-82-2DP, reaction products with adducts of polystyrene and hydroxysuccinimide-functionalized perfluorophenyl azides 139428-47-ODP, reaction products with adducts of polystyrene and hydroxysuccinimide-functionalized perfluorophenyl azides 145708-89-OP
- RL: IMF (Industrial manufacture); PREP (Preparation)
- (functionalized substrate; coating and(or) functionalizing substrates using compds. contg. azide and functional groups)
- IT 7440-57-5D, Gold, reaction products with mercaptodecylamine and compds. contg. azide and functional groups, uses 100387-16-4D, reaction products with metals and compds. contg. azide and functional groups
- RL: TEM (Technical or engineered material use); USES (Uses)
- (functionalized substrate; coating and(or) functionalizing substrates using compds. contg. azide and functional groups)
- IT 9003-99-0, Peroxidase
- RL: PEP (Physical, engineering or chemical process); PROC (Process)
- (horseradish; immobilization of horseradish peroxidase on films of polystyrene reacted with hydroxysuccinimide-functionalized perfluorophenyl azides)
- IT 9002-88-4 9003-07-0, Polypropylene 9003-29-6, Polybutylene
- RL: PEP (Physical, engineering or chemical process); PROC (Process)
- (spin coating silicon wafers with polyolefins)
- IT 7440-21-3, Silicon, miscellaneous 7631-86-9, Silica, miscellaneous
- RL: MSC (Miscellaneous)
- (wafer, coating substrate,; coating and(or) functionalizing substrates using compds. contg. azide and functional groups)
- IT 154438-64-9P 154438-65-OP
- RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(functionalization agent precursor; coating and(or) functionalizing substrates using compds. contg. azide and functional groups)

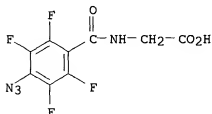
RN 154438-64-9 HCAPLUS

CN Glycine, N-(4-azido-2,3,5,6-tetrafluorobenzoyl)-, ethyl ester (9CI) (CA INDEX NAME)



RN 154438-65-0 HCAPLUS

CN Glycine, N-(4-azido-2,3,5,6-tetrafluorobenzoyl)- (9CI) (CA INDEX NAME)



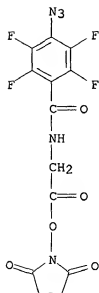
IT 154438-63-8P

RL: IMF (Industrial manufacture); PREP (Preparation)

(functionalization agent; coating and(or) functionalizing substrates using compds. contg. azide and functional groups)

RN 154438-63-8 HCAPLUS

CN Benzamide, 4-azido-N-[2-[(2,5-dioxo-1-pyrrolidinyl)oxy]-2-oxoethyl]-2,3,5,6-tetrafluoro- (9CI) (CA INDEX NAME)



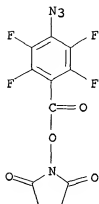
IT 126695-58-7P

RL: IMF (Industrial manufacture); PREP (Preparation)

(functionalized substrate model; coating and(or) functionalizing substrates using compds. contg. azide and functional groups)

RN 126695-58-7 HCAPLUS

CN 2,5-Pyrrolidinedione, 1-[(4-azido-2,3,5,6-tetrafluorobenzoyl)oxy]- (9CI)  
(CA INDEX NAME)



IT 126695-58-7DP, reaction products with polystyrene

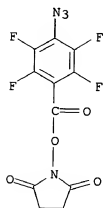
145708-89-0P

RL: IMF (Industrial manufacture); PREP (Preparation)

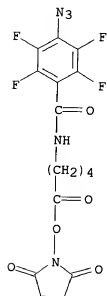
(functionalized substrate; coating and(or) functionalizing substrates using compds. contg. azide and functional groups)

RN 126695-58-7 HCAPLUS

CN 2,5-Pyrrolidinedione, 1-[(4-azido-2,3,5,6-tetrafluorobenzoyl)oxy]- (9CI)  
(CA INDEX NAME)



RN 145708-89-0 HCAPLUS  
 CN Benzanide, 4-azido-N-[5-[(2,5-dioxo-1-pyrrolidinyl)oxy]-5-oxopentyl]-  
 2,3,5,6-tetrafluoro- (9CI) (CA INDEX NAME)



L59 ANSWER 21 OF 55 HCAPLUS COPYRIGHT 2003 ACS  
 AN 1998:9313 HCAPLUS  
 DN 128:93171  
 TI A novel fiber-optic pH sensor incorporating carboxy SNAFL-2 and  
 fluorescent wavelength-ratiometric detection  
 AU Xu, Zhong; Rollins, Andrew; Alcalá, Ricardo; Marchant, Roger E.  
 CS Department of Biomedical Engineering, Case Western Reserve University,  
 Cleveland, OH, 44106-7207, USA  
 SO Journal of Biomedical Materials Research (1998), 39(1), 9-15  
 CODEN: JBMRBG; ISSN: 0021-9304  
 PB John Wiley & Sons, Inc.  
 DT Journal  
 LA English  
 CC 63-8 (Pharmaceuticals)

Section cross-reference(s): 9

AB A fiber-optic pH sensor was prepd. using the self-referencing fluorescent pH probe carboxy seminaphthofluorescein (SNAFL-2). The ratio of the emission from the base form of this dye and the emission near the isoemissive point is insensitive to variations in the excitation intensity and photobleaching. The carboxy SNAFL-2 and a photoaffinity crosslinker, 4-azido-2,3,5,6-tetrafluorobenzoic acid succinimidyl ester, were attached onto poly(acrylamide-co-vinylamine) to form a hydrophilic functional membrane for the fiber-optic sensor. Photo crosslinking was used to create a crosslinked pH-sensing membrane and covalently bind the membrane onto the surface of the PMMA optical fiber. The fluorescent properties of the membrane-fiber conjugate have been detd. The membrane is stable, and the pH sensor shows a fast response time and excellent resoln. in a wide pH range of 3 to 11.

ST optic fiber pH sensor; carboxy SNAFL2 optic fiber pH sensor; fluorescent ratiometric detection fiber optic sensor

IT Fiber optic sensors  
Fluorescence  
(fiber-optic pH sensor incorporating carboxy SNAFL-2 and fluorescent wavelength-ratiometric detection)

IT pH  
(sensors; fiber-optic pH sensor incorporating carboxy SNAFL-2 and fluorescent wavelength-ratiometric detection)

IT 126695-58-7DP, reaction products with acrylamide-vinylamine copolymer and carboxysemnaphthofluorescein 131071-70-ODP, reaction products with acrylamide-vinylamine copolymer 164256-08-ODP, reaction products with acrylamide-vinylamine copolymer 177842-97-6DP, Acrylamide-vinylamine copolymer, reaction products with carboxysemnaphthofluorescein  
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(fiber-optic pH sensor incorporating carboxy SNAFL-2 and fluorescent wavelength-ratiometric detection)

IT 9003-05-8P, Polyacrylamide  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(fiber-optic pH sensor incorporating carboxy SNAFL-2 and fluorescent wavelength-ratiometric detection)

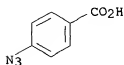
IT 9011-14-7, Pmma  
RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(optical fibers; fiber-optic pH sensor incorporating carboxy SNAFL-2 and fluorescent wavelength-ratiometric detection)

IT 126695-58-7DP, reaction products with acrylamide-vinylamine copolymer and carboxysemnaphthofluorescein  
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(fiber-optic pH sensor incorporating carboxy SNAFL-2 and fluorescent wavelength-ratiometric detection)

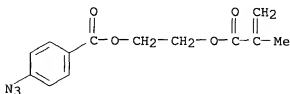
RN 126695-58-7 HCAPIUS

CN 2,5-Pyrrolidinedione, 1-[(4-azido-2,3,5,6-tetrafluorobenzoyl)oxy]- (9CI)  
(CA INDEX NAME)

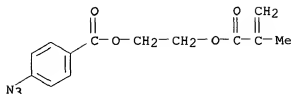
- (for prepn. of methacrylate-type monomer contg. C60 unit)
- IT **6427-66-3P**, 4-Azidobenzoic acid **55025-80-4P**,  
p-Azidobenzoyloxyethyl methacrylate  
RL: RCT (Reactant); **SPN (Synthetic preparation)**; **PREP (Preparation)**; RACT (Reactant or reagent)  
(in prepn. of methacrylate-type monomer contg. C60 unit)
- IT **55025-80-4DP**, p-Azidobenzoyloxyethyl methacrylate, reaction products with C60 99685-96-8DP, [5,6]Fullerene-C60-Ih, reaction products with azidobenzoyloxyethyl methacrylate  
RL: RCT (Reactant); **SPN (Synthetic preparation)**; **PREP (Preparation)**; RACT (Reactant or reagent)  
(prepn. of methacrylate-type monomer contg. C60 unit and and copolymn. with t-Bu methacrylate)
- IT **55025-80-4DP**, p-Azidobenzoyloxyethyl methacrylate, reaction products with C60, polymers with Bu methacrylate 99685-96-8DP, [5,6]Fullerene-C60-Ih, reaction products with azidobenzoyloxyethyl methacrylate, polymers with Bu methacrylate  
RL: **SPN (Synthetic preparation)**; **PREP (Preparation)**  
(prepn. of methacrylate-type monomer contg. C60 unit and and copolymn. with t-Bu methacrylate)
- IT **6427-66-3P**, 4-Azidobenzoic acid **55025-80-4P**,  
p-Azidobenzoyloxyethyl methacrylate  
RL: RCT (Reactant); **SPN (Synthetic preparation)**; **PREP (Preparation)**; RACT (Reactant or reagent)  
(in prepn. of methacrylate-type monomer contg. C60 unit)
- RN 6427-66-3 HCAPLUS  
CN Benzoic acid, 4-azido- (9CI) (CA INDEX NAME)



- RN 55025-80-4 HCAPLUS  
CN Benzoic acid, 4-azido-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester (9CI) (CA INDEX NAME)



- IT **55025-80-4DP**, p-Azidobenzoyloxyethyl methacrylate, reaction products with C60  
RL: RCT (Reactant); **SPN (Synthetic preparation)**; **PREP (Preparation)**; RACT (Reactant or reagent)  
(prepn. of methacrylate-type monomer contg. C60 unit and and copolymn. with t-Bu methacrylate)
- RN 55025-80-4 HCAPLUS  
CN Benzoic acid, 4-azido-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester (9CI) (CA INDEX NAME)



RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of methacrylate-type monomer contg. C60 unit and and copolymn. with t-Bu methacrylate)

L59 ANSWER 24 OF 55 HCAPLUS COPYRIGHT 2003 ACS

AN 1997:187087 HCAPLUS

DN 126:186469

TI Rigid Rod Conjugated Polymers for Nonlinear Optics. 3. Intramolecular H Bond Effects on Poly(phenyleneethynylene) Chains

AU Moroni, M.; Le Moigne, J.; Pham, T. A.; Bigot, J.-Y.

CS Institut de Physique et Chimie des Matériaux de Strasbourg, ULP, Strasbourg, 67037, Fr.

SO Macromolecules (1997), 30(7), 1964-1972

CODEN: MAMOBX; ISSN: 0024-9297

PB American Chemical Society

DT Journal

LA English

CC 35-5 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 36

AB The synthesis and the X-ray and optical characterization of conjugated sol. poly(phenyleneethynylene)s, in which the planarity of the backbone has been improved by intramol. H bonds, are described. The soly. of the polymers was enhanced by increasing the no. of alkyl chains on the aryl group. The electron d. on the Ph ring was also modified by the amino and ester groups, introducing electron-donor or electron-acceptor groups, which also increase the polarizability. The polymers have been synthesized by polycondensation using a palladium-catalyzed coupling reaction, between a bromoaryl and an ethynylaryl unit, with HBr elimination. This method allows the insertion of a triple bond between two Ph groups. It was initially used to obtain **oligomers** or high mol. wt. polymers, having important nonlinear susceptibilities. The new polymers have been characterized by UV-visible and Raman spectroscopies, as well as nonlinear optical measurements of the third-order susceptibilities (.chi.(3)). These measurements show the influence of the H bonds between the aryl groups on the absorption wavelength. In addn., the nonlinear optical measurements show that the .chi.(3) value of the pPY (6.8 .times. 10-10 esu) is close to the highest values obtained in acetylenic polymers such as polydiacetylenes.

ST polyphenyleneethynylene synthesis nonlinear optical property

IT Hydrogen bond

Third-order nonlinear optical properties

(hydrogen bond effect on nonlinear optical properties of rigid rod poly(phenyleneethynylenes))

IT Polyacetylenes, preparation

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

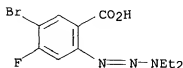
(prepn. and nonlinear optical properties of rigid rod

poly(phenyleneethynylenes))

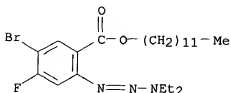
IT 446-32-2P 25462-61-7P 25462-66-2P 25462-67-3P, 2,5-Dibromo-4-nitroacetanilide 25462-68-4P, 2,5-Dibromo-4-nitroaniline 137530-06-4P



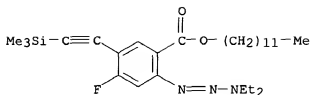
143945-65-7P 187326-20-1P 187326-21-2P **187326-23-4P**  
**187326-24-5P 187326-25-6P** 187326-26-7P  
 RL: RCT (Reactant); **SPN (Synthetic preparation); PREP (Preparation);** RACT (Reactant or reagent)  
 (intermediate; synthesis of rigid rod poly(phenyleneethynylenes) with nonlinear optical properties)  
 IT 187326-28-9P 187326-31-4P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (monomer; prepn. and nonlinear optical properties of rigid rod poly(phenyleneethynylenes))  
 IT 187326-19-8P 187326-22-3P 187326-27-8P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (monomer; synthesis of rigid rod poly(phenyleneethynylenes) with nonlinear optical properties)  
 IT 187326-29-0P 187326-30-3P 187326-32-5P 187326-33-6P 187326-34-7P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. and nonlinear optical properties of rigid rod poly(phenyleneethynylenes))  
 IT 394-01-4, 4-Fluoro-2-nitrobenzoic acid 3638-73-1, 2,5-Dibromoaniline 134332-29-9  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (starting material; synthesis of rigid rod poly(phenyleneethynylenes) with nonlinear optical properties)  
 IT **187326-23-4P 187326-24-5P 187326-25-6P**  
 RL: RCT (Reactant); **SPN (Synthetic preparation); PREP (Preparation);** RACT (Reactant or reagent)  
 (intermediate; synthesis of rigid rod poly(phenyleneethynylenes) with nonlinear optical properties)  
 RN 187326-23-4 HCAPLUS  
 CN Benzoic acid, 5-bromo-2-(3,3-diethyl-1-triazenyl)-4-fluoro- (9CI) (CA INDEX NAME)



RN 187326-24-5 HCAPLUS  
 CN Benzoic acid, 5-bromo-2-(3,3-diethyl-1-triazenyl)-4-fluoro-, dodecyl ester (9CI) (CA INDEX NAME)



RN 187326-25-6 HCAPLUS  
 CN Benzoic acid, 2-(3,3-diethyl-1-triazenyl)-4-fluoro-5-[(trimethylsilyl)ethynyl]-, dodecyl ester (9CI) (CA INDEX NAME)



L59 ANSWER 25 OF 55 HCAPLUS COPYRIGHT 2003 ACS

AN 1997:71232 HCAPLUS

DN 126:190885

TI Photo-immobilization of dipyrindamole (Persantin) at the surface of polyurethane biomaterials: reduction of in vitro thrombogenicity  
 AU Aldenhoff, Yvette B. J.; Blezer, Ron; Lindhout, Theo; Koole, Leo H.  
 CS Centre for Biomaterials Research, University Maastricht, Maastricht, 6200 MD, Neth.

SO Biomaterials (1997), 18(2), 167-172

CODEN: BIMADU; ISSN: 0142-9612

PB Elsevier

DT Journal

LA English

CC 63-7 (Pharmaceuticals)

AB Dipyrindamole is a well-known vasodilator and a powerful inhibitor of activation and aggregation of blood platelets. Moreover, dipyrindamole is essentially nontoxic. The drug is used extensively in clin. anticoagulation regimes, for example pre- and post-coronary angioplasty procedures. Recently, we have found that photochem., covalent coupling of dipyrindamole to polyurethane surfaces leads to improved thromboresistance in vitro. This phenomenon is now studied in more detail. Both qual. and more quant. biochem. expts. were performed in order to characterize the in vitro blood compatibility of a set of polyurethane surfaces onto which dipyrindamole was immobilized. First, SEM was used to examine the morphol. of platelets which adhered during incubation with platelet-rich plasma. These expts. showed that immobilization of dipyrindamole leads to a clearly decreased no. of adherent platelets and to a largely diminished propensity of the surface to activate adherent platelets. Secondly, an in vitro thrombogenicity assay was run. These expts. showed that the thromboresistance increased with increasing surface d. of immobilized dipyrindamole. A short spacer chain, sepg. dipyrindamole for the polymer surface, was found to improve the thromboresistance further. Such a spacer chain apparently increases the efficacy of the immobilized drug. Collectively, the present results further substantiate the idea that dipyrindamole retains its inhibitory activity with respect to activation and aggregation of blood platelets, when the compd. is covalently attached to a polymer surface. The possible utility of these findings with respect to the development of an artificial blood vessel prosthesis is discussed briefly.

ST dipyrindamole immobilization polyurethane vascular prosthetic

IT Blood vessel

(artificial; photoimmobilization of dipyrindamole at surface of polyurethane biomaterials for redn. of thrombogenicity)

IT Immobilization, biochemical

(photoimmobilization of dipyrindamole at surface of polyurethane biomaterials for redn. of thrombogenicity)

IT Urethane rubber, biological studies

RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(photoimmobilization of dipyridamole at surface of polyurethane biomaterials for redn. of thrombogenicity)

IT 167103-72-2DP, reaction products with polyurethanes and pyridamole

167103-73-3DP, reaction products with polyurethanes and pyridamole  
 RL: BPR (Biological process); BSU (Biological study, unclassified); PRP  
 (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL  
 (Biological study); PREP (Preparation); PROC (Process); USES (Uses)

(photoimmobilization of dipyrnidamole at surface of polyurethane biomaterials for redn. of thrombogenicity)

IT 58-32-2, Dipyridamole

RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(photoimmobilization of dipyridamole at surface of polyurethane biomaterials for redn. of thrombogenicity)

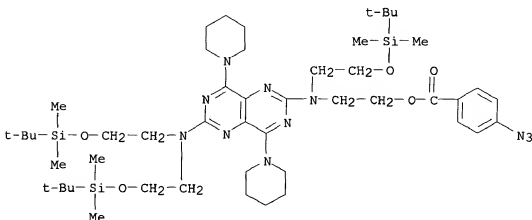
IT 167103-72-2DP, reaction products with polyurethanes and pyridamole

167103-73-3DP, reaction products with polyurethanes and pyridamole  
 RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)

(photoimmobilization of dipyridamole at surface of polyurethane biomaterials for redn. of thrombogenicity)

RN 167103-72-2 HCAPLUS

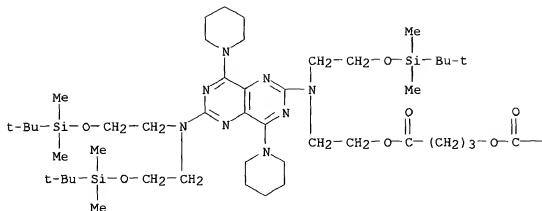
CN Benzoic acid, 4-azido-, 2-[[[bis[2-[(1,1-dimethylethyl)dimethylsilyl]oxy]ethyl]amino]-4,8-di-1-piperidinylpyrimido[5,4-d]pyrimidin-2-yl][2-[(1,1-dimethylethyl)dimethylsilyl]oxy]ethyl]amino]ethyl ester (9CI) (CA INDEX NAME)



RN 167103-73-3 HCAPLUS

CN Benzoic acid, 4-azido-, 8-[6-[bis[2-[(1,1-dimethylethyl)dimethylsilyl]oxy  
ethyl]amino]-4,8-di-1-piperidinylpyrimido[5,4-d]pyrimidin-2-yl]-  
12,12,13,13-tetramethyl-4-oxo-5,11-dioxo-8-aza-12-silatetradec-1-yl ester  
(9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L59 ANSWER 26 OF 55 HCAPLUS COPYRIGHT 2003 ACS  
 AN 1996:666922 HCAPLUS  
 DN 125:285013  
 TI Anti-adhesion films and compositions for medical use  
 IN Yeung, Jeffrey E.; Chu, George H.; Delustro, Frank A.; Rhee, Woonza M.  
 PA Collagen Corporation, USA  
 SO Eur. Pat. Appl., 25 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 IC ICM A61L031-00  
 CC 63-7 (Pharmaceuticals)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 732110	A1	19960918	EP 1996-102339	19960216
	EP 732110	B1	20011024		
	R: AT, CH, DE, FR, GB, IT, LI, NL, SE				
	US 5580923	A	19961203	US 1995-403360	19950314

KATHLEEN FULLER EIC 1700/PARKER LAW 308-4290

CA	2165740	AA	19960915	CA	1995-2165740	19951220
AT	207369	E	20011115	AT	1996-102339	19960216
JP	08257111	A2	19961008	JP	1996-58139	19960314

PRAI US 1995-403360 A 19950314

AB Anti-adhesion films useful for the prevention of surgical adhesions are disclosed. These films comprise substrate materials (such as collagen) and heterobifunctional anti-adhesion binding agents, wherein the substrate material is covalently linked to receptive tissue within the body of a patient via the binding agent. Preferred binding agents comprise substrate-reactive and tissue-selective functional groups. Anti-adhesion compns. are prep'd. by modification of collagen with disulfide and succinimide groups.

ST antiadhesion film medical

IT Wound healing promoters  
(antiadhesion films and compns. for medical use)

IT Collagens, biological studies  
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(modified; antiadhesion films and compns. for medical use)

IT Medical goods  
(dressings, antiadhesion films and compns. for medical use)

IT 68181-17-9DP, SPDP, reaction products with collagen 92921-24-9DP, reaction products with collagen 92921-26-1DP, reaction products with collagen 97185-84-7DP, reaction products with collagen **147492-84-0DP**, reaction products with collagen 169751-10-4DP, reaction products with collagen 183006-80-6DP, reaction products with collagen 183006-84-0DP, reaction products with collagens 183006-85-1DP, reaction products with collagens 183006-86-2DP, reaction products with collagen **183006-87-3DP**, reaction products with collagen  
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(antiadhesion films and compns. for medical use)

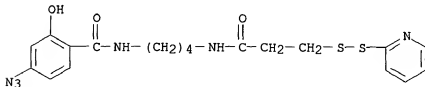
IT 108-30-5, Succinic anhydride, reactions 1003-42-5, 2H-Thiopyran-2-one, tetrahydro- 2127-03-9 25322-68-3  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(antiadhesion films and compns. for medical use)

IT 183006-81-7P 183006-82-8P 183006-83-9P 183006-84-0P 183006-86-2P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(antiadhesion films and compns. for medical use)

IT **147492-84-0DP**, reaction products with collagen  
**183006-87-3DP**, reaction products with collagen  
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(antiadhesion films and compns. for medical use)

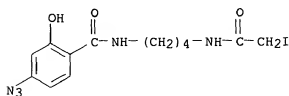
RN 147492-84-0 HCAPLUS

CN Benzamide, 4-azido-2-hydroxy-N-[4-[[1-oxo-3-(2-pyridinyldithio)propyl]amino]butyl]- (9CI) (CA INDEX NAME)



RN 183006-87-3 HCAPLUS

CN Benzamide, 4-azido-2-hydroxy-N-[4-[(iodoacetyl)amino]butyl]- (9CI) (CA INDEX NAME)



L59 ANSWER 27 OF 55 HCAPLUS COPYRIGHT 2003 ACS

AN 1996:590429 HCAPLUS

DN 125:278255

TI Photochemical Coupling of Aryl Azides to Poly(ether urethane) Surfaces: Studies with a Fluorescent Model Compound

AU van der Heiden, Arthur P.; Koole, Leo H.

CS Biomaterials Research Institute Maastricht, University of Limburg, Maastricht, 6200 MD, Neth.

SO Macromolecules (1996), 29(22), 7012-7015

CODEN: MAMOBX; ISSN: 0024-9297

PB American Chemical Society

DT Journal

LA English

CC 39-7 (Synthetic Elastomers and Natural Rubber)

Section cross-reference(s): 63

AB A fluorescent aryl azide, N-[2-[(4-azidobenzoyl)oxy]ethyl]-5-(dimethylamino)-N-methyl-1-naphthalenesulfonamide, was prepd. as a model compd. for aryl azides which are used for the photochem. surface modification of poly(ether urethane) elastomer. We found that 25 nmol/cm<sup>2</sup> of the azide had coupled to the outermost polymer layers and 7.7 nmol/cm<sup>2</sup> to the layers within the polymer. This surface modification was studied in search of surfaces with optimized blood compatibility.

ST polyether polyurethane rubber azide coupling; fluorescent azide coupling urethane rubber

IT Rubber, urethane, preparation

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (butanediol-diphenylmethane diisocyanate-polytetramethylene glycol, block, photochem. reaction products with fluorescent aryl azide; detn. of degree of coupling in)

IT **182439-16-3DP**, photochem. reaction products with polyether-polyurethane rubber

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (detn. of degree of coupling in)

IT 41688-01-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (intermediate; in prepn. of fluorescent aryl azide coupling agent)

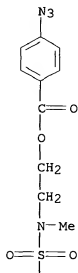
IT 182439-16-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (prepn. and photochem. coupling with polyurethane rubber)

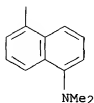
IT 107678-92-2DP, 1,4-Butanediol-MDI-polytetramethylene glycol block copolymer, photochem. reaction products with N-[2-[(4-

azidobenzoyl]oxy]ethyl]-5-(dimethylamino)-N-methyl-1-naphthalenesulfonamide  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (rubber; detn. of degree of coupling in)  
 IT 109-83-1, 2-(Methylamino)ethanol 605-65-2, Dansyl chloride 14848-01-2, 4-Azidobenzoyl chloride  
 RL: RCT (Reactant); RACT (Reactant or reagent) (starting material; in prepn. of fluorescent aryl azide coupling agent)  
 IT 182439-16-3DP, photochem. reaction products with polyether-polyurethane rubber  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (detn. of degree of coupling in)  
 RN 182439-16-3 HCAPLUS  
 CN Benzoic acid, 4-azido-, 2-[[[5-(dimethylamino)-1-naphthalenyl]sulfonyl]methylamino]ethyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



AN 1996:588157 HCAPLUS  
 DN 125:284747  
 TI Synthesis of phenylazido-derivatized substances and photochemical surface modification to immobilize functional groups  
 AU Sugawara, Takashi; Matsuda, Takehisa  
 CS Dep. Bioeng., Natl. Cardiovascular Cent. Res. Inst., Suita, 565, Japan  
 SO Journal of Biomedical Materials Research (1996), 32(2), 157-164  
 CODEN: JBMRBG; ISSN: 0021-9304  
 PB Wiley  
 DT Journal  
 LA English  
 CC 63-7 (Pharmaceuticals)  
 AB Phenylazido-derivatized low-mol.-wt. substances and copolymers contg. hydrocarbon or fluorocarbon alkyl groups, sulfonato or amino groups, and hydroxyl groups were prepd. Upon coating of polyvinyl alc. or polyethylene films with these materials, and subsequent UV irradiation, covalent fixation took place only at the irradiated portions of surfaces providing a hydrophobic, ionic, or hydrophilic nature. This was verified by electron spectroscopy and water contact-angle measurement. Aorta endothelial cells adhered to photochem. modified surfaces which had alkyl, sulfonato, or amino groups, whereas little adhesion occurred to a hydroxyl group-bearing hydrogel-like surface. When UV light was passed through a photomask onto the polymer surfaces, patterned and microprocessed surfaces having cell-adhering and -nonadhering regions were obtained. The potential applications of this photochem. surface processing method in biomedical engineering are discussed.  
 ST photochem surface polymer adhesion endothelial cell  
 IT Interfacial structure  
   (adhesion of aorta endothelial cells to polymers with modified surface functional groups in relation to)  
 IT Immobilization, biochemical  
   (binding of polymers with modified surface functional groups to polyvinyl alc. and polyethylene films)  
 IT Ultraviolet radiation  
   (binding of polymers with modified surface functional groups to polyvinyl alc. and polyethylene films promoted by)  
 IT Artery  
   (aorta, endothelium, adhesion of aorta endothelial cells to polymers with modified surface functional groups)  
 IT Adhesion  
   (bio-, aorta endothelial cells adhesion to polymers with modified surface functional groups)  
 IT 9002-88-4, Polyethylene 9002-89-5, Polyvinyl alcohol  
 RL: PEP (Physical, engineering or chemical process); PROC (Process)  
   (photochem. fixation of phenylazido-derivatized substances to films of)  
 IT 73847-62-8, 3-Azidostyrene  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
   (polymer with styrene and octafluoropentyl methacrylate)  
 IT 355-93-1, 2,2,3,3,4,4,5,5-Octafluoropentyl methacrylate  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
   (polymer with azido-styrene)  
 IT 55025-80-4  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
   (polymer with hydroxyethyl methacrylate)  
 IT 98-70-4  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
   (polymer with styrene)  
 IT 1520-21-4, 4-Aminostyrene



RL: RCT (Reactant); RACT (Reactant or reagent)  
(polymn. with styrene and azido-styrene)

IT 100-42-5, **reactions**  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(polymn. with styrenesulfonic acid and aminostyrene)

IT 868-77-9, 2-Hydroxyethyl methacrylate  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(polymn. with (azidobenzoyloxy)ethyl methacrylate)

IT **64597-95-1P 182803-51-6P 182803-52-7P**  
182803-53-8P 182803-54-9P 182803-55-0P  
RL: PEP (Physical, engineering or chemical process); PRP (Properties);  
**SPN (Synthetic preparation); PREP (Preparation); PROC**  
(Process)  
(prepn. and photochem. fixation to polymeric films)

IT 307-29-9  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction with azidobenzoic acid)

IT 124-30-1, 1-Octadecanamine  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction with azidobenzoyloxysuccinimide)

IT 6427-66-3, 4-Azidobenzoic acid  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction with pentadecafluorooctylamine)

IT 53053-08-0  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction with stearylamine)

IT **64597-95-1P 182803-51-6P 182803-52-7P**  
RL: PEP (Physical, engineering or chemical process); PRP (Properties);  
**SPN (Synthetic preparation); PREP (Preparation); PROC**  
(Process)  
(prepn. and photochem. fixation to polymeric films)

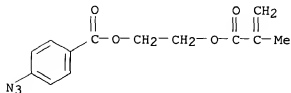
RN 64597-95-1 HCAPLUS

CN Benzoic acid, 4-azido-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester,  
polymer with 2-hydroxyethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 55025-80-4

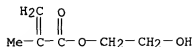
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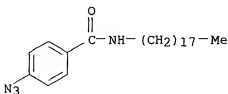
CM 2

CRN 868-77-9

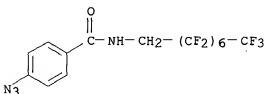
CMF C6 H10 O3



RN 182803-51-6 HCAPLUS  
 CN Benzamide, 4-azido-N-octadecyl- (9CI) (CA INDEX NAME)



RN 182803-52-7 HCAPLUS  
 CN Benzamide, 4-azido-N-(2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentafluorooctyl)- (9CI) (CA INDEX NAME)



LS9 ANSWER 29 OF 55 HCAPLUS COPYRIGHT 2003 ACS

AN 1996:290075 HCAPLUS

DN 124:311836

TI Water-insoluble azide-containing carriers coated with boronic acid-containing compound for glyco-hemoglobin fractionation and lymphokine-activated killer induction

IN Funayama, Masashi

PA Funayama Masashi, Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G01N033-72

CC 9-15 (Biochemical Methods)

Section cross-reference(s): 1, 15

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08062222	A2	19960308	JP 1994-230154	19940819
PRAI	JP 1994-230154		19940819		
AB	Boronic acid-contg. compds. conjugated with water-insol. carriers contg. azide or carboxy group are useful for quantitation of glycoHb and for induction of lymphokine-activated killer. In example, 3-azidostyrene was prepd. from 3-nitrostyrene, copolymd. with styrene, conjugated with 3-aminophenylboronic acid, and used for quantitating glycoHb. Azidobenzoyloxyethyl methacrylate was prepd. from p-azidobenzoic acid and				

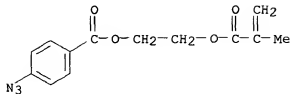
- hydroxyethyl methacrylate, copolymd. with Me methacrylate, conjugated with 3-aminophenylboronic acid and used for inducing effector cells.
- ST polymer copolymer boronic acid compd conjugate; glycoHb fractionation lymphokine activated killer induction
- IT Carriers  
(boronic acid-contg.; water-insol. azide-contg. carriers coated with boronic acid-contg. compd. for glycoHb fractionation and lymphokine-activated killer induction)
- IT Polymers, biological studies  
RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(boronic acid-contg.; water-insol. azide-contg. carriers coated with boronic acid-contg. compd. for glycoHb fractionation and lymphokine-activated killer induction)
- IT Functional groups  
(phenylazido; water-insol. azide-contg. carriers coated with boronic acid-contg. compd. for glycoHb fractionation and lymphokine-activated killer induction)
- IT Carboxyl group  
Lymphocyte  
(water-insol. azide-contg. carriers coated with boronic acid-contg. compd. for glycoHb fractionation and lymphokine-activated killer induction)
- IT Lymphokines and Cytokines  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(water-insol. azide-contg. carriers coated with boronic acid-contg. compd. for glycoHb fractionation and lymphokine-activated killer induction)
- IT Functional groups  
(azido, water-insol. azide-contg. carriers coated with boronic acid-contg. compd. for glycoHb fractionation and lymphokine-activated killer induction)
- IT Polymers, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(co-, o-nitrobenzyl ester group-contg.; water-insol. azide-contg. carriers coated with boronic acid-contg. compd. for glycoHb fractionation and lymphokine-activated killer induction)
- IT Lymphocyte  
(effector cell, water-insol. azide-contg. carriers coated with boronic acid-contg. compd. for glycoHb fractionation and lymphokine-activated killer induction)
- IT Hemoglobins  
RL: ANT (Analyte); PUR (Purification or recovery); ANST (Analytical study); PREP (Preparation)  
(glyco-, water-insol. azide-contg. carriers coated with boronic acid-contg. compd. for glycoHb fractionation and lymphokine-activated killer induction)
- IT Lymphocyte  
(killer cell, lymphokine-activated; water-insol. azide-contg. carriers coated with boronic acid-contg. compd. for glycoHb fractionation and lymphokine-activated killer induction)
- IT 13780-71-7DP, Boronic acid, polymers or compds.  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(water-insol. azide-contg. carriers coated with boronic acid-contg.

- compd. for glycoHb fractionation and lymphokine-activated killer induction)
- IT 9002-89-5, Poly(vinyl alcohol) 176389-95-0D, conjugates with 3-aminophenylboronic acid  
 RL: BSU (Biological study, unclassified); BIOL (Biological study) (water-insol. azide-contg. carriers coated with boronic acid-contg. compd. for glycoHb fractionation and lymphokine-activated killer induction)
- IT 30418-59-8DP, 3-Aminophenylboronic acid, conjugates with 3-azidostyrene-styrene copolymer **55025-81-5DP**, conjugates with 3-aminophenylboronic acid **160628-30-8DP**, conjugates with 3-aminophenylboronic acid  
 RL: BUU (Biological use, unclassified); **SPN (Synthetic preparation)**; THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)  
 (water-insol. azide-contg. carriers coated with boronic acid-contg. compd. for glycoHb fractionation and lymphokine-activated killer induction)
- IT 53053-08-0  
 RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)  
 (water-insol. azide-contg. carriers coated with boronic acid-contg. compd. for glycoHb fractionation and lymphokine-activated killer induction)
- IT 79-41-4, reactions 586-39-0, 3-Nitrostyrene 868-77-9 6427-66-3, p-Azidobenzoic acid  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (water-insol. azide-contg. carriers coated with boronic acid-contg. compd. for glycoHb fractionation and lymphokine-activated killer induction)
- IT **55025-80-4P**, p-Azidobenzoyloxyethyl methacrylate 73847-62-8P, 3-Azidostyrene 142281-00-3P  
 RL: RCT (Reactant); **SPN (Synthetic preparation)**; **PREP (Preparation)**; RACT (Reactant or reagent)  
 (water-insol. azide-contg. carriers coated with boronic acid-contg. compd. for glycoHb fractionation and lymphokine-activated killer induction)
- IT **55025-81-5DP**, conjugates with 3-aminophenylboronic acid **160628-30-8DP**, conjugates with 3-aminophenylboronic acid  
 RL: BUU (Biological use, unclassified); **SPN (Synthetic preparation)**; THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)  
 (water-insol. azide-contg. carriers coated with boronic acid-contg. compd. for glycoHb fractionation and lymphokine-activated killer induction)
- RN 55025-81-5 HCAPLUS
- CN Benzoic acid, 4-azido-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 55025-80-4

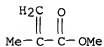
CMF C13 H13 N3 O4



CM 2

CRN 80-62-6

CMF C5 H8 O2



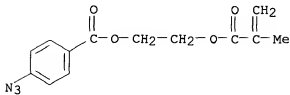
RN 160628-30-8 HCAPLUS

CM Benzoic acid, 4-azido-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester, polymer with ethenylbenzene and (2-nitrophenyl)methyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 55025-80-4

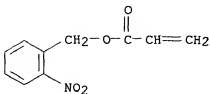
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CM 2

CRN 49594-70-9

CMF C10 H9 N O4

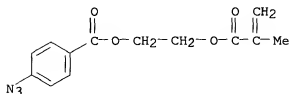


CM 3

CRN 100-42-5  
CMF C8 H8

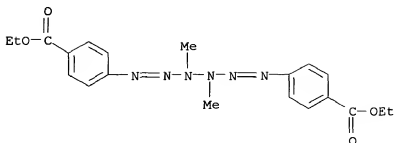
$H_2C=CH-PH$

IT 55025-80-4P, p-Azidobenzoyloxyethyl methacrylate  
 RI: RCT (Reactant); **SPN (Synthetic preparation)**; **PREP (Preparation)**; RACT (Reactant or reagent)  
 (water-insol. azide-contg. carriers coated with boronic acid-contg. compd. for glycoHb fractionation and lymphokine-activated killer induction)  
 RN 55025-80-4 HCAPLUS  
 CN Benzoic acid, 4-azido-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester (9CI) (CA INDEX NAME)



L59 ANSWER 30 OF 55 HCAPLUS COPYRIGHT 2003 ACS  
 AN 1996:180514 HCAPLUS  
 DN 124:261935  
 TI Low molar mass and **oligomeric** hexazadienes. Synthesis, thermolysis and photolysis  
 AU Nuyken, Oskar; Scherer, Cliff; Voit, Brigitte  
 CS Lehrstuhl fuer Makromolekulare Stoffe, Tech. Univ. Muenchen, Garching, D-85747, Germany  
 SO Macromolecular Chemistry and Physics (1996), 197(3), 1101-20  
 CODEN: MCHPES; ISSN: 1022-1352  
 PB Huethig & Wepf  
 DT Journal  
 LA English  
 CC 35-8 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 22, 23  
 AB Several new low molar mass 1,6-diarylhexazadiene model compds. and a **oligomeric** structure, contg. hexazadiene units in the main chain, were prepd. by N-N-coupling of arom. diazonium salts with hydrazine derivs. Thermolytic and photolytic decompn. of these labile compds. were studied in detail. A strong dependence of the decompn. rate on the substitution pattern was obsd. Electron donating arom. substituents as well as Me groups at N3 and N4 position decrease stability in photolysis and thermolysis. On the other hand electron withdrawing arom. substituents and acetyl groups at N3 and N4 stabilize the hexazadiene unit. Kinetics anal. showed that in some cases the decompn. reaction may be described by unimol. one step pathway. Activation energies and rate consts. were evaluated. The **oligomeric** hexazadiene exhibits a somewhat higher stability towards heat and light compared to the low-mol.-wt. model compds.  
 ST **oligomeric** hexazadiene prepn thermolysis photolysis; polyhexazadiene prepn thermolysis photolysis; model compd polyhexazadiene

- degrdn; kinetics degrdn polyhexazadiene model compd
- IT Absorption  
Kinetics of photolysis  
Kinetics of thermal decomposition  
Photolysis  
Thermal decomposition  
(prepn. and thermal and photochem. decompn. of low.-mol.-wt. and **oligomeric** hexazadienes)
- IT Diazoamino compounds  
Polyketones  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)  
(prepn. and thermal and photochem. decompn. of low.-mol.-wt. and **oligomeric** hexazadienes)
- IT Polymer degradation  
(photochem., prepn. and thermal and photochem. decompn. of low.-mol.-wt. and **oligomeric** hexazadienes)
- IT Polymer degradation  
(thermal, prepn. and thermal and photochem. decompn. of low.-mol.-wt. and **oligomeric** hexazadienes)
- IT 10312-71-7P 175411-47-9P 175411-48-0P 175411-49-1P, 1,6-Diphenyl-3,4-dimethylhexazadiene 175411-50-4P 175411-51-5P  
**175411-52-6P**  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); **SPN (Synthetic preparation)**; **PREP (Preparation)**; PROC (Process); RACT (Reactant or reagent)  
(model compd.; prepn. and thermal and photochem. decompn. of low.-mol.-wt. and **oligomeric** hexazadienes)
- IT 175411-53-7  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(model compd.; prepn. and thermal and photochem. decompn. of low.-mol.-wt. and **oligomeric** hexazadienes)
- IT 175411-54-8P 175411-55-9P  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)  
(prepn. and thermal and photochem. decompn. of low.-mol.-wt. and **oligomeric** hexazadienes)
- IT 62-53-3, Benzenamine, reactions 94-09-7, p-Ethoxycarbonylaniline 95-69-2, 4-Chloro-2-methylaniline 99-92-3, p-Acetylaniline 104-94-9, p-Methoxyaniline 106-47-8, p-Chloroaniline, reactions 106-49-0, p-Methylaniline, reactions 306-37-6, N,N'-Dimethylhydrazine dihydrochloride 3148-73-0, N,N'-Diacetylhydrazine  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(starting material; in prepn. and thermal and photochem. decompn. of hexazadiene model compds.)
- IT **175411-52-6P**  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); **SPN (Synthetic preparation)**; **PREP (Preparation)**; PROC (Process); RACT (Reactant or reagent)  
(model compd.; prepn. and thermal and photochem. decompn. of low.-mol.-wt. and **oligomeric** hexazadienes)
- RN 175411-52-6 HCAPLUS
- CN Benzoic acid, 4,4'-(3,4-dimethyl-1,5-hexazadiene-1,6-diyl)bis-, diethyl ester (9CI) (CA INDEX NAME)



L59 ANSWER 31 OF 55 HCAPLUS COPYRIGHT 2003 ACS

AN 1996:102422 HCAPLUS

DN 124:140410

TI Immobilization of chemotherapeutic by photochemical reaction

IN Funayama, Masashi

PA Funayama Masashi, Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM A61K009-00

ICS A61K041-00; B01D015-00; C07H021-00; C09D201-02; G01N033-50

CC 9-16 (Biochemical Methods)

Section cross-reference(s): 3

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07277952	A2	19951024	JP 1994-100525	19940403
PRAI	JP 1994-100525		19940403		

AB Chemotherapeutic agent is immobilized on water-insol. carrier coated with azide-contg. **polymer** by photochem. **reaction**. The carrier-immobilized chemotherapeutic agent is useful for capturing and removing DNA-related substances or neg. charged physiol. active substance. In example, 3-azidostyrene was prep'd. and copolym'd. with styrene, the copolymer was coated on polyethyleneterephthalate film for immobilization of streptomycin upon irradiation with UV light. The copolymer-immobilized streptomycin was used for capturing and quantifying nucleic acid, e.g. lambda. DNA and HeLa cell-derived RNA.

ST chemotherapeutic immobilization nucleic acid quantification; azide polymer antibiotic immobilization DNA RNA

IT Deoxyribonucleic acids  
Nucleic acids

Ribonucleic acids

RL: PUR (Purification or recovery); REM (Removal or disposal); PREP (Preparation); PROC (Process)

(azide group-contg. polymer for immobilization of antibiotic for capturing and quantitating nucleic acids)

IT Carriers

(azide group-contg.; azide group-contg. polymer for immobilization of antibiotic for capturing and quantitating nucleic acids)

IT Polymers, biological studies

RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

(azido-contg.; azide group-contg. polymer for immobilization of antibiotic for capturing and quantitating nucleic acids)



- IT Antibiotics  
(aminoglycoside, azide group-contg. polymer for immobilization of antibiotic for capturing and quantitating nucleic acids)
- IT Functional groups  
(azido, azide group-contg. polymer for immobilization of antibiotic for capturing and quantitating nucleic acids)
- IT Organic compounds, preparation  
RL: PUR (Purification or recovery); REM (Removal or disposal); PREP (Preparation); PROC (Process)  
(biol., neg. charged/physiol. active; azide group-contg. polymer for immobilization of antibiotic for capturing and quantitating nucleic acids)
- IT Therapeutics  
(chemo-, azide group-contg. polymer for immobilization of antibiotic for capturing and quantitating nucleic acids)
- IT Antibiotics  
(macrolide, azide group-contg. polymer for immobilization of antibiotic for capturing and quantitating nucleic acids)
- IT Antibiotics  
(.beta.-lactam, azide group-contg. polymer for immobilization of antibiotic for capturing and quantitating nucleic acids)
- IT 60-54-8, Tetracycline 1405-97-6, Gramicidin 1406-11-7, Polymyxin  
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
(antibiotics; azide group-contg. polymer for immobilization of antibiotic for capturing and quantitating nucleic acids)
- IT 50-07-7, Mitomycin C 50-44-2, 6-Mercaptopurin 50-76-0, Actinomycin D 51-21-8, 5-Fluorouracil 55-22-1, Isonicotinic acid, biological studies 57-92-1, Streptomycin, biological studies 58-14-0, Pyrimethamine 59-05-2, Methotrexate 60-87-7, Promethazine 63-74-1, Sulfonamide 65-49-6, p-Aminosalicylic acid 68-41-7, Cycloserine 126-07-8, Griseofulvin 738-70-5, Trimethoprim 1394-02-1, Trichomycin 1404-90-6, Vancomycin 2079-00-7, Blastidin S 7059-24-7, Chromomycin A3 11056-06-7, Bleomycin 61379-65-5  
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
(azide group-contg. polymer for immobilization of antibiotic for capturing and quantitating nucleic acids)
- IT **55025-81-5P** 142281-00-3P  
RL: BUU (Biological use, unclassified); **SPN (Synthetic preparation)**; BIOL (Biological study); **PREP (Preparation)**; USES (Uses)  
(azide group-contg. polymer for immobilization of antibiotic for capturing and quantitating nucleic acids)
- IT 53053-08-0  
RL: MOA (Modifier or additive use); USES (Uses)  
(azide group-contg. polymer for immobilization of antibiotic for capturing and quantitating nucleic acids)
- IT 586-39-0, 3-Nitrostyrene 868-77-9 6427-66-3, p-Azidobenzoic acid 26628-22-8, Sodium azide  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(azide group-contg. polymer for immobilization of antibiotic for capturing and quantitating nucleic acids)
- IT **55025-80-4P** 73847-62-8P, 3-Azidostyrene  
RL: RCT (Reactant); **SPN (Synthetic preparation)**; **PREP (Preparation)**; RACT (Reactant or reagent)  
(azide group-contg. polymer for immobilization of antibiotic for capturing and quantitating nucleic acids)

IT 32075-31-3, Pyridinecarboxylic acid  
 RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
 (synthetic antibiotics; azide group-contg. polymer for immobilization of antibiotic for capturing and quantitating nucleic acids)

IT 55025-81-5P  
 RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation);  
 USES (Uses)  
 (azide group-contg. polymer for immobilization of antibiotic for capturing and quantitating nucleic acids)

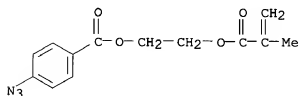
RN 55025-81-5 HCAPLUS

CN Benzoic acid, 4-azido-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 55025-80-4

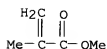
CMF C13 H13 N3 O4



CM 2

CRN 80-62-6

CMF C5 H8 O2

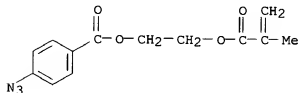


IT 55025-80-4P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(azide group-contg. polymer for immobilization of antibiotic for capturing and quantitating nucleic acids)

RN 55025-80-4 HCAPLUS

CN Benzoic acid, 4-azido-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester (9CI) (CA INDEX NAME)



L59 ANSWER 32 OF 55 HCAPLUS COPYRIGHT 2003 ACS

AN 1995:983156 HCAPLUS

DN 124:30531

TI Rigid Rod Conjugated Polymers for Nonlinear Optics. 2. Synthesis and Characterization of Phenylene-Ethynylene **Oligomers**

AU Wautelet, P.; Moroni, M.; Oswald, L.; Le Moigne, J.; Pham, A.; Bigot, J.-Y.; Luzzati, S.

CS Groupe des Matériaux Organiques, Institut de Physique et Chimie des Matériaux, Strasbourg, 67037, Fr.

SO Macromolecules (1996), 29(1), 446-55

CODEN: MAMOBX; ISSN: 0024-9297

PB American Chemical Society

DT Journal

LA English

CC 35-5 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 73

AB In order to make a comparison between the properties of low mol. wt. poly(phenyleneethynylene) type compds. and the corresponding high mol. wt. polymers, we have synthesized **oligomers** and model mols. of poly(phenyleneethynylene) derivs. by two different routes. This paper describes the synthesis and the X-ray and optical characterization of conjugated sol. **oligomers**, as well as model trimers and pentamers of the same structure in which the soly. was improved by fixing flexible alkyl chains of 10 or 12 carbons to the backbone. The electron d. on the Ph ring was also enhanced or reduced by introducing either electron-donor or electron-acceptor groups. The **oligomers** were synthesized by polycondensation using a palladium catalyzed coupling reaction, between a bromoaryl and an ethynylaryl unit, with HBr elimination. This method allows the insertion of a triple bond between two Ph groups. It was initially used in our lab. in order to obtain high mol. wt. polymers. It has been adapted to favor the prodn. of lower mol. wt. compds., by shortening the reaction time or by an important increase of the amt. of catalyst. The trimers and pentamers were synthesized step by step by using a route which involves a selective protection-deprotection method, followed by the palladium coupling reaction. Model compds. and **oligomers** were characterized by UV-visible and Raman spectroscopies, as well as nonlinear optical measurements of the third order susceptibilities (.chi.(3)). These measurements allowed us to show the influence of the donor/acceptor groups and the chain lengths on the absorption wavelength. In addn., the nonlinear optical measurements show that the .chi.(3) value of the pentamer (1.6 .times. 10<sup>-10</sup> esu) is close to the value of the polymer (4.6 .times. 10<sup>-10</sup> esu).

ST conjugated ethynylene phenylene **oligomer** nonlinear optics; acetylenephenylene polymer **oligomer** prepn NLO; third order susceptibility conjugated ethynylene phenylene

IT Laser radiation

Liquid crystals, polymeric  
(prepn. and characterization of phenylene-ethynylene **oligomers** for nonlinear optics)

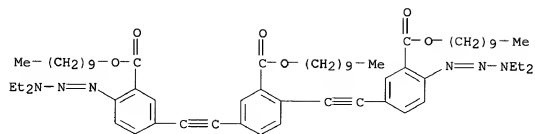
IT Polyphenyls

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(polyacetylene-, **oligomeric**; prepn. and characterization of phenylene-ethynylene **oligomers** for nonlinear optics)

IT Polyacetylenes, preparation

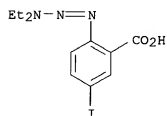
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(polyphenyl-, **oligomeric**; prepn. and characterization of

- phenylene-ethynylene **oligomers** for nonlinear optics)
- IT Optical nonlinear property  
(susceptibility, third-order, prepn. and characterization of  
phenylene-ethynylene **oligomers** for nonlinear optics)
- IT 123-31-9, 1,4-Benzenediol, reactions 143-15-7, 1-Bromododecane  
585-76-2, 3-Bromobenzoic acid 25245-34-5, 1-Bromo-2,5-dimethoxybenzene  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(model/monomer synthesis; prepn. and characterization of  
phenylene-ethynylene **oligomers** for nonlinear optics)
- IT 583-69-7P, 2-Bromo-1,4-hydroquinone 3230-09-9P, 1,4-  
Bis(dodecanoxy)benzene 137436-30-7P, 1,4-Dibromo-2,5-  
bis(dodecanoxy)benzene 152270-07-0P, Dodecyl 2,5-dibromobenzoate  
**171368-71-1P** 171368-72-2P 171368-73-3P, 1-Bromo-2,5-  
bis(dodecanoxy)benzene 171368-74-4P, Dodecyl 3-bromobenzoate  
171368-75-5P, Dodecyl 2-bromobenzoate 171368-76-6P, Decyl  
2-bromobenzoate 171368-77-7P, 1-Ethynyl-2,5-bis(dodecanoxy)benzene  
171368-78-8P, Dodecyl 3-ethynylbenzoate 171368-79-9P, Dodecyl  
2-ethynylbenzoate 171368-80-2P, Decyl 2-ethynylbenzoate 171368-81-3P,  
1-Bromo-2,5-bis(dodecanoxy)-4-nitrobenzene 171368-82-4P,  
4-Bromo-2,5-bis(dodecanoxy)aniline 171368-83-5P 171368-84-6P  
171368-85-7P **171368-86-8P** **171368-87-9P**  
**171368-88-0P**  
RL: RCT (Reactant); **SPN (Synthetic preparation)**; **PREP**  
(**Preparation**); RACT (Reactant or reagent)  
(model/monomer synthesis; prepn. and characterization of  
phenylene-ethynylene **oligomers** for nonlinear optics)
- IT 171368-65-3P 171368-66-4P 171368-67-5P 171368-68-6P 171368-69-7P  
171368-70-0P  
RL: PRP (Properties); **SPN (Synthetic preparation)**; **PREP (Preparation)**  
(model; prepn. and characterization of phenylene-ethynylene  
**oligomers** for nonlinear optics)
- IT 152270-00-3P, 1,4-Diethynyl-2,5-bis(dodecanoxy)benzene 152270-06-9P,  
Dodecyl 2,5-diethynylbenzoate  
RL: RCT (Reactant); **SPN (Synthetic preparation)**; **PREP (Preparation)**; **RACT**  
(Reactant or reagent)  
(monomer; prepn. and characterization of phenylene-ethynylene  
**oligomers** for nonlinear optics)
- IT 603-35-0, Triphenylphosphine, uses 1066-54-2, Trimethylsilylacetylene  
7647-10-1, Palladium dichloride  
RL: CAT (Catalyst use); **USES (Uses)**  
(prepn. and characterization of phenylene-ethynylene **oligomers**  
for nonlinear optics)
- IT 152270-01-4P 152270-08-1P 171714-31-1P 171714-34-4P  
RL: PRP (Properties); **SPN (Synthetic preparation)**; **PREP (Preparation)**  
(prepn. and characterization of phenylene-ethynylene **oligomers**  
for nonlinear optics)
- IT **171368-71-1P** **171368-86-8P** **171368-87-9P**  
**171368-88-0P**  
RL: RCT (Reactant); **SPN (Synthetic preparation)**; **PREP**  
(**Preparation**); RACT (Reactant or reagent)  
(model/monomer synthesis; prepn. and characterization of  
phenylene-ethynylene **oligomers** for nonlinear optics)
- RN 171368-71-1 HCAPLUS
- CN Benzoic acid, 2,5-bis[[3-[(decyloxy)carbonyl]-4-(3,3-diethyl-1-  
triazenyl)phenyl]ethynyl]-, decyl ester (9CI) (CA INDEX NAME)



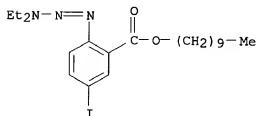
RN 171368-86-8 HCAPLUS

CN Benzoic acid, 2-(3,3-diethyl-1-triazenyl)-5-iodo- (9CI) (CA INDEX NAME)



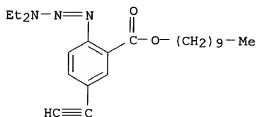
RN 171368-87-9 HCAPLUS

CN Benzoic acid, 2-(3,3-diethyl-1-triazenyl)-5-iodo-, decyl ester (9CI) (CA INDEX NAME)



RN 171368-88-0 HCAPLUS

CN Benzoic acid, 2-(3,3-diethyl-1-triazenyl)-5-ethynyl-, decyl ester (9CI) (CA INDEX NAME)



L59 ANSWER 33 OF 55 HCAPLUS COPYRIGHT 2003 ACS

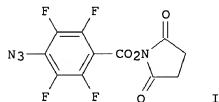
KATHLEEN FULLER EIC 1700/PARKER LAW 308-4290

AN 1995:742569 HCAPLUS  
 DN 123:145020  
 TI Chemically functionalized polymers and their manufacture  
 IN Keana, John F. W.; Wybourn, Martin N.; Cai, Sui Xiong; Manoj, Kanskar  
 PA University of Oregon, USA  
 SO PCT Int. Appl., 37 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 IC ICM G03C005-56  
 ICS G03F007-008; C08F251-00; C08F257-02; C08F291-14  
 CC 35-8 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 74

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9422053	A1	19940929	WO 1994-US2982	19940318
	W: AU, CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	CA 2158550	AA	19940929	CA 1994-2158550	19940318
	AU 9465210	A1	19941011	AU 1994-65210	19940318
	EP 689684	A1	19960103	EP 1994-912812	19940318
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 08511284	T2	19961126	JP 1994-521276	19940318
	AU 9533062	A1	19951214	AU 1995-33062	19951004
PRAI	US 1993-33382		19930318		
	US 1993-6453		19930121		
	WO 1994-US2982		19940318		

GI



AB The functionalizing reagent comprises mols. having a nitrenogenic group and a functionalizing group. The functionalizing-reagent mols. are brought into **reactive** proximity to the **polymer** mols. and exposed to a reaction-energy source such as photons, electrons, or heat, which converts the nitrenogenic groups to nitrene intermediates that covalently react with CH, NH, OH, C:C, CC, SiOH, and SiOSi moieties to cause nitrene addn. or insertion of the functionalizing groups to the polymer mols. Functionalization can be via a one- or multiple-stage process. Thus, radiation-induced reaction of polystyrene with azide I as a spun coating on NaCl disk, reaction of the resulting intermediate 2 h with 4-azido-2,3,5,6-tetrafluorobenzylamine-HCl in MeNO<sub>2</sub> in the presence of Et<sub>3</sub>N gave a azide group-contg. polymer.

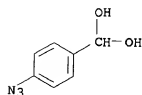
ST radiation functionalization polymer; polystyrene azide group contg

IT Fluoropolymers

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (azidotetrafluorobenzene group-contg. polymers)

IT Lithography

- AB The polyurethanes are characterized by having polyoxyethylene-polyoxytetramethylene copolymers as diol components and the modification with crosslinkable functional groups. One such material was prepd. by poly(mg. THF, ethylene oxide, 4,4'-diphenylmethane diisocyanate, and a cinnamoyl group-contg. butanediol made from 1,2,4-butanetriol and cinnamoyl chloride. Thrombus formation test was done for an artificial tubular blood vessel made from the material.
- ST polyurethane elastomer antithrombotic material; blood vessel artificial medical device
- IT Rubber, urethane, preparation  
 RL: DEV (Device component use); IMF (Industrial manufacture); PRP (Properties); PREP (Preparation); USES (Uses)  
 (antithrombotic polyurethane elastomers and medical devices)
- IT Medical goods  
 (antithrombogenic, antithrombotic polyurethane elastomers and medical devices)
- IT Blood vessel  
 Organ  
 (artificial, antithrombotic polyurethane elastomers and medical devices)
- IT 160192-51-8P **160192-53-0P** 160192-55-2P 160792-37-0P  
 RL: DEV (Device component use); **IMF (Industrial manufacture)**;  
 PRP (Properties); **PREP (Preparation)**; USES (Uses)  
 (antithrombotic polyurethane elastomers and medical devices)
- IT **160192-53-0P**  
 RL: DEV (Device component use); **IMF (Industrial manufacture)**;  
 PRP (Properties); **PREP (Preparation)**; USES (Uses)  
 (antithrombotic polyurethane elastomers and medical devices)
- RN 160192-53-0 HCAPLUS
- CN Methanediol, (4-azidophenyl)-, polymer with 1,2-ethanediamine, 1,1'-methylenebis[4-isocyanatobenzene], oxirane and tetrahydrofuran (9CI) (CA INDEX NAME)
- CM 1
- CRN 160192-52-9
- CMF C7 H7 N3 O2



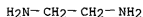
- CM 2
- CRN 109-99-9
- CMF C4 H8 O



CM 3

CRN 107-15-3

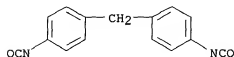
CMF C2 H8 N2



CM 4

CRN 101-68-8

CMF C15 H10 N2 O2



CM 5

CRN 75-21-8

CMF C2 H4 O



L59 ANSWER 36 OF 55 HCAPLUS COPYRIGHT 2003 ACS

AN 1994:638465 HCAPLUS

DN 121:238465

TI manufacture of medical goods with blood-compatible elastomers

IN Kojitani, Shinzo; Ikeda, Hiroko; Ikeda, Yoko

PA Mitsubishi Cable Ind Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM A61L033-00

CC 63-7 (Pharmaceuticals)

FAN.CNT 1

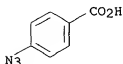
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06181980	A2	19940705	JP 1992-339117	19921218
PRAI	JP 1992-339117		19921218		

AB Medical goods are manufd. with biocompatible elastomers obtained by introducing crosslinking functional groups into halogenated butyl rubber-polyoxyethylene graft copolymers. The materials are durable and suitable for manufg. blood-contacting medical goods.

ST medical good biocompatible elastomer

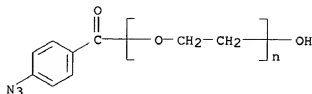


- IT Blood  
Medical goods  
(manuf. of medical goods with blood-compatible elastomers)
- IT Rubber, synthetic  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(manuf. of medical goods with blood-compatible elastomers)
- IT Rubber, butyl, biological studies  
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(chlorinated, reaction products with sodium cinnamate or other compds., graft copolymer with metalated polyethylene glycol Me ether; manuf. of medical goods with blood-compatible elastomers)
- IT 538-42-IDP, Sodium cinnamate, reaction products with PEG esters, graft copolymer with chlorobutyl rubber 9004-74-4DP, potassium salt, graft copolymer with functional group-contg. butyl rubber 70280-50-IDP, reaction products with PEG esters, graft copolymer with chlorobutyl rubber 108006-99-IDP, potassium salt, graft copolymer with chlorobutyl rubber 158590-20-6DP, potassium salt, graft copolymer with chlorobutyl rubber  
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(manuf. of medical goods with blood-compatible elastomers)
- IT 9010-85-9P  
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(rubber, chlorinated, reaction products with sodium cinnamate or other compds., graft copolymer with metalated polyethylene glycol Me ether; manuf. of medical goods with blood-compatible elastomers)
- IT 70280-50-IDP, reaction products with PEG esters, graft copolymer with chlorobutyl rubber 158590-20-6DP, potassium salt, graft copolymer with chlorobutyl rubber  
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(manuf. of medical goods with blood-compatible elastomers)
- RN 70280-50-1 HCAPLUS
- CN Benzoic acid, 4-azido-, sodium salt (9CI) (CA INDEX NAME)

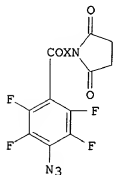


● Na

- RN 158590-20-6 HCAPLUS
- CN Poly(oxy-1,2-ethanediyl), .alpha.-(4-azidobenzoyl)-.omega.-hydroxy- (9CI)  
(CA INDEX NAME)



L59 ANSWER 37 OF 55 HCAPLUS COPYRIGHT 2003 ACS  
 AN 1994:318741 HCAPLUS  
 DN 120:318741  
 TI N-Hydroxysuccinimide Ester Functionalized Perfluorophenyl Azides as Novel Photoactive Heterobifunctional Crosslinking Reagents. The Covalent Immobilization of Biomolecules to Polymer Surfaces  
 AU Yan, Mingdi; Cai, Sui Xiong; Wybourne, M. N.; Keana, John F. W.  
 CS Department of Chemistry, University of Oregon, Eugene, OR, 97403, USA  
 SO Bioconjugate Chemistry (1994), 5(2), 151-7  
 CODEN: BCCHE; ISSN: 1043-1802  
 DT Journal  
 LA English  
 CC 9-15 (Biochemical Methods)  
 Section cross-reference(s): 7, 25, 27  
 GI



I, X=NH(CH<sub>2</sub>)<sub>n</sub>CO<sub>2</sub>  
 II, X=O

AB The synthesis of N-hydroxysuccinimide (NHS) functionalized perfluorophenyl azides (I, n = 1 or 4) is described together with a general method for the covalent modification of polymer surfaces using heterobifunctional, photoactivable crosslinking reagents II and I (n = 4). The NHS-active ester group was covalently attached to the polymer surface via an efficient CH bond insertion reaction of the photogenerated, highly reactive nitrene intermediate derived from I. The NHS ester could further react with a variety of primary amine-contg. reagents including biomols. by way of amide formation. The method was illustrated as follows. Photolysis of polystyrene (PS) and poly(3-octylthiophene) (P3OT) thin films spin-coated with I or II gave films. Each film was then exposed to an aq. soln. of horseradish peroxidase (HRP), giving other films. The amts. of HRP immobilized on PS and P3OT were calcd. from enzyme activity assays to be in the range 0.1-1.0 ng/mm<sup>2</sup>. Using this surface

- functionalization methodol., biotin-streptavidin-biotin-HRP was constructed on the PS film. The storage stability of HRP thus immobilized through the extended linker, biotin-streptavidin-biotin, was enhanced as compared to that of HRP directly immobilized on the PS surface.
- ST immobilization peroxidase polymer surface crosslinking prep; hydroxysuccinimide perfluorophenyl azide crosslinking polymer immobilization
- IT Immobilization, biochemical  
(of horse radish peroxidase, on hydroxysuccinimide ester-functionalized perfluorophenylazides **reaction** products with **polymer** surfaces crosslinking reagents)
- IT Crosslinking agents  
(photochem., hydroxysuccinimide ester-functionalized perfluorophenylazide **reaction** products with **polymer** surfaces, prepn. of and horse radish peroxidase immobilization on)
- IT 623-33-6, Glycine ethyl ester hydrochloride  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(amidation by, of azidotetrafluorobenzoic acid)
- IT 660-88-8, 5-Aminopentanoic acid  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(amidation by, of azidotetrafluorobenzoyl chloride)
- IT 122590-78-7  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(amidation of, with aminopentanoic acid)
- IT 122590-77-6  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(amidation of, with glycine Et ester)
- IT 6066-82-6, N-Hydroxysuccinimide  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(esterification of, with benzoylglycine deriv. or benzamidopentanoic acid deriv.)
- IT 9003-99-0P, Peroxidase  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and covalent immobilization of, to polymer deriv. surfaces)
- IT **154438-65-0P 154438-66-1P**  
RL: RCT (Reactant); **PREP (Preparation)**; RACT (Reactant or reagent)  
(prepn. and esterification of, with hydroxysuccinimide)
- IT **154438-64-9P**  
RL: RCT (Reactant); **PREP (Preparation)**; RACT (Reactant or reagent)  
(prepn. and hydrolysis of)
- IT **154438-63-8P**  
RL: **PREP (Preparation)**  
(prepn. of)
- IT 9013-20-1DP, Streptavidin, **reaction** products with **polymer** derivs. and biotin 115416-38-1DP, **reaction** products with polystyrene derivs. and streptavidin  
RL: **PREP (Preparation)**  
(prepn. of and horse radish peroxidase immobilization on surfaces of)
- IT **126695-58-7DP**, **reaction** products with polystyrene, photolyzed  
**145708-89-0DP**, **reaction** products with polystyrene, photolyzed  
RL: **PREP (Preparation)**  
(prepn. of, as heterobifunctional crosslinking reagents for biomol. covalent immobilization)
- IT 9003-53-6DP, Polystyrene, **reaction** products with succinimidyl benzamidocarboxylate derivs., photolyzed 104934-51-2DP, Poly(3-octylthiophene), **reaction** products with succinimidyl

benzamidocarboxylate derivs., photolyzed

RL: PREP (Preparation)

(prepn. of, as heterobifunctional crosslinking reagents for covalent biomols. immobilization)

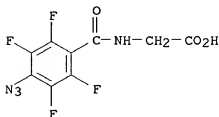
IT 154438-65-0P 154438-66-1P

RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and esterification of, with hydroxysuccinimide)

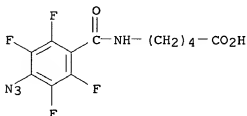
RN 154438-65-0 HCAPLUS

CN Glycine, N-(4-azido-2,3,5,6-tetrafluorobenzoyl)- (9CI) (CA INDEX NAME)



RN 154438-66-1 HCAPLUS

CN Pentanoic acid, 5-[(4-azido-2,3,5,6-tetrafluorobenzoyl)amino]- (9CI) (CA INDEX NAME)



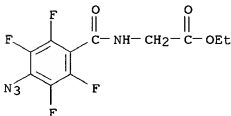
IT 154438-64-9P

RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and hydrolysis of)

RN 154438-64-9 HCAPLUS

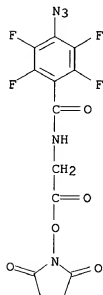
CN Glycine, N-(4-azido-2,3,5,6-tetrafluorobenzoyl)-, ethyl ester (9CI) (CA INDEX NAME)



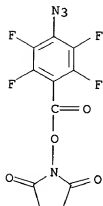
IT 154438-63-8P

RL: PREP (Preparation)

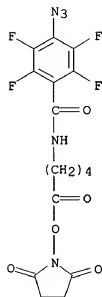
(prepn. of)  
 RN 154438-63-8 HCAPLUS  
 CN Benzamide, 4-azido-N-[2-[(2,5-dioxo-1-pyrrolidinyl)oxy]-2-oxoethyl]-  
 2,3,5,6-tetrafluoro- (9CI) (CA INDEX NAME)



IT 126695-58-7DP, reaction products with polystyrene, photolyzed  
 145708-89-0DP, reaction products with polystyrene, photolyzed  
 RL: **PREP (Preparation)**  
 (prepn. of, as heterobifunctional crosslinking reagents for biomol.  
 covalent immobilization)  
 RN 126695-58-7 HCAPLUS  
 CN 2,5-Pyrrolidinedione, 1-[(4-azido-2,3,5,6-tetrafluorobenzoyl)oxy]- (9CI)  
 (CA INDEX NAME)



RN 145708-89-0 HCAPLUS  
 CN Benzamide, 4-azido-N-[5-[(2,5-dioxo-1-pyrrolidinyl)oxy]-5-oxopentyl]-  
 2,3,5,6-tetrafluoro- (9CI) (CA INDEX NAME)



L59 ANSWER 38 OF 55 HCAPLUS COPYRIGHT 2003 ACS

AN 1994:271538 HCAPLUS

DN 120:271538

TI Surface graft polymerization on organic substrates

IN Matsuda, Takehisa; Sugawara, Takashi

PA Terumo Corp, Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08J007-16

ICS C08F002-00; C08F291-00

CC 35-8 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05310979	A2	19931122	JP 1991-135539	19910510
PRAI	JP 1991-135539		19910510		

AB Polymer precursors having photoreactive groups and (A) groups active to bond-forming reaction are linked at least partially on the surface of org. materials then radical polymn. initiators are linked to (A) and monomers are thermally or photopolymd. to graft the surface. Thus, 0.82 g p-azidobenzoic acid was treated with 2.4 g polyallylamine in the presence of NaHCO<sub>3</sub> in DMF and treated with a water-sol. carbodiimide to give a precursor polymer aq. soln., which was applied onto a poly(vinyl acetate) film, imagewise UV-irradiated, subjected to removal of nonirradiated precursor, impregnated with DMF soln. contg. 4,4'-azobis(4-cyanovaleic acid), further impregnated with styrene (I) PhH soln. then the film was subjected to polymn. of I to give a surface-grafted film.

ST surface graft polymn org substrate; photopolymerizable precursor surface graft polymn; nitrene precursor polymer surface grafting; polyallylamine azidobenzoic acid adduct; polyvinyl acetate film surface grafting; styrene surface graft polymn

IT Coating materials  
(photoreactive, polymers, for precursor for surface grafting of org. substances)

IT Polymerization  
(graft, surface, for org. substrates, photoreactive precursor polymer intermediates for)

IT Polymerization catalysts  
(radical, for surface grafting of org. substances, photoreactive precursor polymer coatings for)

IT 9003-20-7, Poly(vinyl acetate) 25038-59-9, PET, uses  
RL: USES (Uses)  
(films, surface graft polymn. of, photoreactive precursor polymer coatings for)

IT 79-06-1, Acrylamide, reactions 100-42-5, Styrene, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(grafting of, on org. material surface, photoreactive precursor polymer coatings for)

IT 6427-66-3DP, p-Azidobenzoic acid, **reaction** products with **polymers** 30551-89-4DP, Poly(allylamine), adducts with azido-contg. compds.  
RL: **PREP (Preparation)**  
(prepn. of, coatings, for surface graft polymn. of org. substrates)

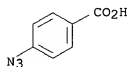
IT 108450-72-2P, Styrene-vinyl acetate graft copolymer 111159-01-4P, Acrylamide-ethylene glycol-terephthalic acid graft copolymer  
RL: PREP (Preparation)  
(prepn. of, on film surface, photoreactive precursor coating for)

IT 2638-94-0, 4,4'-Azobis(4-cyanovaleric acid)  
RL: USES (Uses)  
(radical graft polymn. catalyst, on surface of org. substrates, photoreactive precursor polymer coatings for)

IT 6427-66-3DP, p-Azidobenzoic acid, **reaction** products with **polymers**  
RL: **PREP (Preparation)**  
(prepn. of, coatings, for surface graft polymn. of org. substrates)

RN 6427-66-3 HCAPLUS

CN Benzoic acid, 4-azido- (9CI) (CA INDEX NAME)



L59 ANSWER 39 OF 55 HCAPLUS COPYRIGHT 2003 ACS

AN 1994:106509 HCAPLUS

DN 120:106509

TI Syntheses and characterizations of phenylacetylene macrocyclics - towards porous organic solids

AU Wu, Ziyang; Moore, Jeffrey S.

CS Macromol. Sci. Eng. Cent., Univ. Michigan, Ann Arbor, MI, 48109-1055, USA

SO Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (1993), 34(1), 122-3

CODEN: ACPPAY; ISSN: 0032-3934

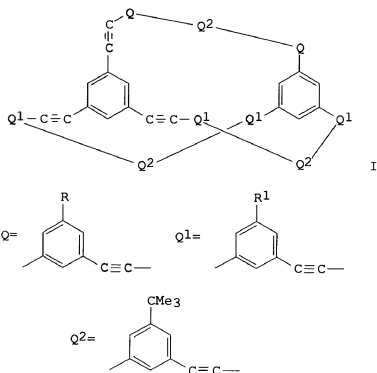
DT Journal

LA English

CC 25-29 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)

## Section cross-reference(s): 35

GI

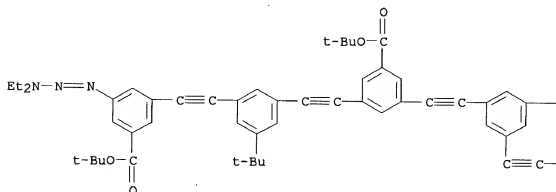


- AB Title comps. I (R, R1 = H, CO<sub>2</sub>CMe<sub>3</sub>, CO<sub>2</sub>H) were prep'd. from 3,5-Br<sub>2</sub>C<sub>6</sub>H<sub>3</sub>C.tplbond.CSiMe<sub>3</sub> and phenylacetylene **oligomers** Et<sub>2</sub>NN:N-Q-Q<sub>2</sub>-Q-H and I-Q<sub>1</sub>-Q<sub>2</sub>-Q<sub>1</sub>-C<sub>6</sub>H<sub>3</sub>(C.tplbond.CSiMe<sub>3</sub>)<sub>2</sub>-3,5 (II) via sequential iodination, desilylation, and coupling reaction of bis(diethyltriazene) 1,3,5-(Et<sub>2</sub>NN:N-Q<sub>1</sub>-Q<sub>2</sub>-Q<sub>1</sub>)<sub>2</sub>C<sub>6</sub>H<sub>3</sub>C.tplbond.CSiMe<sub>3</sub> with II and cyclization of the resulting coupling products.
- ST rigid phenylacetylene macrocycle; coupling iodophenylacetylene **oligomer**
- IT Macrocylic compounds  
RL: PRP (Properties)  
(rigid phenylacetylenes, in synthesis of porous org. solids)
- IT 144001-09-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(coupling reaction of, with (diethyltriazenyl)phenylacetylene **oligomers**)
- IT 144001-14-9 144001-24-1 151982-08-0  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(coupling reaction of, with dibromo(trimethylsilyl)phenylacetylene)
- IT 144001-17-2 144001-33-2 151982-09-1  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(coupling reaction of, with diiodophenylacetylene **oligomer** deriv.)
- IT 144001-16-1P 144001-25-2P **151982-11-5P**  
RL: SPN (Synthetic preparation); PREP (Preparation)

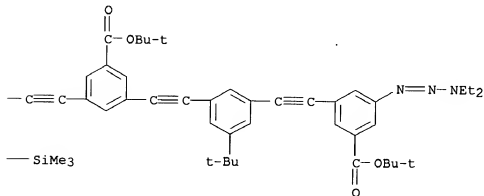


- (prepn. and sequential deprotection and coupling reaction of, with bis(trimethylsilylethynyl)iodophenylacetylene **oligomers**)
- IT 152547-30-3P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and thermolysis of, hexaacid from)
- IT 144000-97-5P 144001-35-4P 152547-31-4P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)
- IT 144001-19-4P 151982-10-4P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn., conversion into diiodide, cyclization of)
- IT 151982-11-5P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and sequential deprotection and coupling reaction of, with bis(trimethylsilylethynyl)iodophenylacetylene **oligomers**)
- RN 151982-11-5 HCAPLUS
- CN Benzoic acid, 3,3'-[[5-[(trimethylsilyl)ethynyl]-1,3-phenylene]di-2,1-ethynediyl]bis[5-[[3-[[3-(3,3-diethyl-1-triazenyl)-5-[(1,1-dimethylethoxy)carbonyl]phenyl]ethynyl]-5-(1,1-dimethylethyl)phenyl]ethynyl]-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



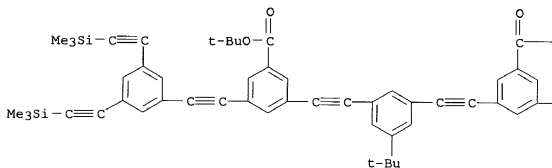
IT 151982-10-4P

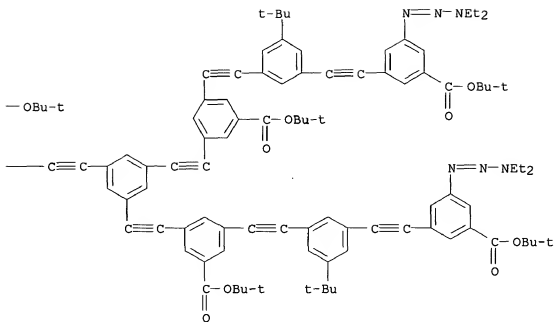
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn., conversion into diiodide, cyclization of)

RN 151982-10-4 HCAPLUS

CN Benzoic acid, 3,3'-[5-[[3-[[3-[[3-[[3,5-bis(trimethylsilyl)ethynyl]phenyl]ethynyl]-5-[(1,1-dimethylethoxy)carbonyl]phenyl]ethynyl]-5-(1,1-dimethylethyl)phenyl]ethynyl]-5-[(1,1-dimethylethoxy)carbonyl]phenyl]ethynyl]-1,3-phenylene]di-2,1-ethynediyl]bis[5-[[3-[[3-[[3,3-diethyl-1-triazenyl]-5-[(1,1-dimethylethoxy)carbonyl]phenyl]ethynyl]-5-(1,1-dimethylethyl)phenyl]ethynyl]-, bis(1,1-dimethylethyl) ester (9Ci) (CA INDEX NAME)

PAGE 1-A





L59 ANSWER 40 OF 55 HCAPLUS COPYRIGHT 2003 ACS

AN 1994:106508 HCAPLUS

DN 120:106508

TI Synthesis of phenylacetylene macrocycles with site-specific functionalization and controlled geometry

AU Zhang, Jinshan; Moore, Jeffrey S.

CS Macromol. Res. Cent., Univ. Michigan, Ann Arbor, MI, 48109-1055, USA

SO Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (1993), 34(1), 120-1  
CODEN: ACPPAY; ISSN: 0032-3934

DT Journal

LA English

CC 25-29 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)

OS CASREACT 120:106508

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

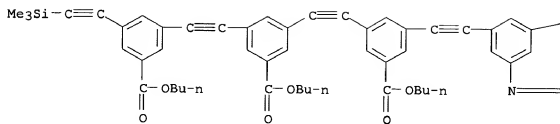
AB Title compds., e.g., I (n = 1, 2, 3), were prepd. by selective deprotection of 5,3-R2(R1C.tplbond.C)C6H3R (II, R = CO2Bu, OBu; R1 = Me3Si; R2 = Et2NN:N). Thus, II (R = CO2Bu, R1 = Me3Si, R2 = Et2NN:N) was deprotected with K2CO3 in MeOH to give II (R = CO2Bu, R1 = H) (III) and deprotection with MeI gave II (R = CO2Bu, R2 = iodo) (IV). Cross-coupling reaction of III with IV gave the dimer V (m = 2, R1 = Me3Si, R2 = Et2NN:N), which could be converted into V (m = 4, 5, 6, 7; R1 = Me3Si, R2 = Et2NN:N) by repeating the process. Deprotecting both ends of the linear precursors gave V (m = 4, 5, 6, 7; R1 = H, R2 = iodo), which, except for V (m = 4), cyclized on treatment with Pd to give I.

KATHLEEN FULLER EIC 1700/PARKER LAW 308-4290

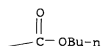
- ST phenylacetylene macrocycle; triazenylsilylethynylbenzoate regioselective deprotection coupling; cyclization ethynyl iodobenzoate **oligomer**  
palladium catalyzed
- IT Regiochemistry  
(of functionalization of macrocyclic phenylacetylenes)
- IT Coupling reaction  
(of phenylacetylene derivs., in synthesis of macrocyclic compds.)
- IT Ring closure and formation  
(of phenylacetylene **oligomers**, macrocycles from)
- IT Macrocyclic compounds  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of, by cyclization of phenylacetylene **oligomers**)
- IT 152266-36-9  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(deprotection and redn. of)
- IT 109-52-4, Valeric acid, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(esterification of, with macrocyclic phenylacetylene-hexaphenol deriv.)
- IT 109-65-9, 1-Bromobutane 629-04-9, 1-Bromoheptane  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(etherification by, of macrocyclic phenylacetylene-benzyl alc. deriv.)
- IT 152266-40-5P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and alkylation of)
- IT 152266-41-6P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and alkylation with bromoheptane and esterification with pentanoic acid)
- IT 152266-46-1P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and attempted cyclization of)
- IT 152266-51-8P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and coupling reaction of, with (diethylaminoazide)ethynylbenzoate)
- IT 152266-50-7P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and coupling reaction of, with iodo(trimethylsilylethynyl)benzoate)
- IT 152266-53-0P 152266-54-1P 152266-55-2P  
152266-56-3P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and deprotection of)
- IT 144374-61-8P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and ether cleavage of)
- IT 152266-47-2P 152266-48-3P 152266-49-4P 152266-57-4P 152266-58-5P  
152266-59-6P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and intramol. cyclization of)
- IT 152266-52-9P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)



PAGE 1-A



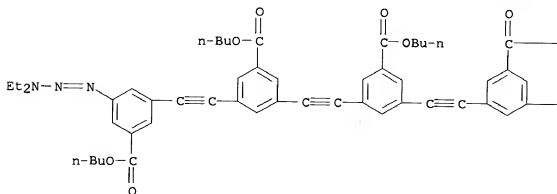
PAGE 1-B



RN 152266-54-1 HCAPLUS

CN Benzoic acid, 3-[[[3-(butoxycarbonyl)-5-[[3-(butoxycarbonyl)-5-(3,3-diethyl-1-triazenyl)phenyl]ethynyl]phenyl]ethynyl]-5-[[3-(butoxycarbonyl)-5-[[3-(butoxycarbonyl)-5-[[3-(trimethylsilyl)ethynyl]phenyl]ethynyl]phenyl]ethynyl]-, butyl ester (9CI) (CA INDEX NAME)

PAGE 1-A

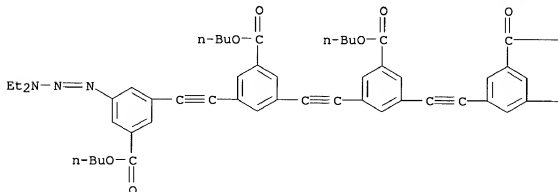




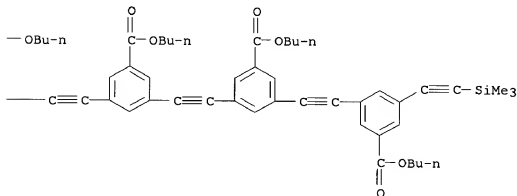
RN 152266-56-3 HCAPLUS

CN Benzoic acid, 3-[[[3-(butoxycarbonyl)-5-[[3-(butoxycarbonyl)-5-[[3-(butoxycarbonyl)-5-(3,3-diethyl-1-triazenyl)phenyl]ethynyl]phenyl]ethynyl]phenyl]ethynyl]-5-[[3-(butoxycarbonyl)-5-[[5-(butoxycarbonyl)-3-[[3-(butoxycarbonyl)-5-[(trimethylsilyl)ethynyl]phenyl]ethynyl]phenyl]ethynyl]phenyl]ethynyl]-, butyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



IT 152266-52-9P

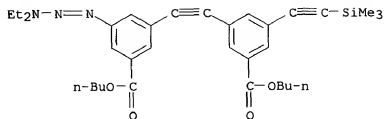
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and sequential deprotection and coupling reaction of)

RN 152266-52-9 HCAPLUS

CN Benzoic acid, 3-[[[3-(butoxycarbonyl)-5-(3,3-diethyl-1-triazenyl)phenyl]ethynyl]-5-[(trimethylsilyl)ethynyl]-, butyl ester (9CI) (CA INDEX NAME)





L59 ANSWER 41 OF 55 HCAPLUS COPYRIGHT 2003 ACS

AN 1993:104955 HCAPLUS

DN 118:104955

TI Radiation-curable isobutylene copolymers for coating and adhesive applications

IN Audett, Jay Douglas; Dias, Anthony Jay; Powers, Kenneth William; Wang, Hsien Chang

PA Exxon Chemical Patents, Inc., USA

SO PCT Int. Appl., 31 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C08F002-54

ICS C08F210-10; C09D125-04; G03F007-027; C08L023-22

CC 42-10 (Coatings, Inks, and Related Products)

Section cross-reference(s): 38, 39

FAN.CNT 16

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9211295	A1	19920709	WO 1991-US9653	19911219
	W: JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
	AT 140465	E	19960815	AT 1990-905077	19891120
	ES 2090128	T3	19961016	ES 1990-905077	19891120
	EP 563271	A1	19931006	EP 1992-903232	19911219
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	JP 06504078	T2	19940512	JP 1991-503751	19911219
PRAI	US 1990-633645	A	19901220		
	EP 1990-905077	A	19891120		
	WO 1991-US9653	W	19911219		

AB The title polymers are prepd. from C4-7 isocolefins and p-alkylstyrenes (A) with radiation-reactive functional groups, optionally nonreactive groups, at the p-alkyl groups of A. Thus, a 97.5:2.5 mol% isobutylene-p-methylstyrene copolymer (I) was brominated at 40.degree. under light to form a I contg. 0.9 mol% benzylic bromide group, which can be further reacted with  $\text{Et}_3\text{N}$ ,  $\text{Et}_3\text{P}$ , Na diethyldithiocarbamate, carboxylic acid (esters), fatty acid (esters), and photoinitiator derivs. A PhMe soln. of I-4-hydroxybenzophenone reaction product was formed as a 1-mil film on a steel plate or blended (1:1) with ECR143H tackifier and exposed under 0.24-J/cm<sup>2</sup> UV radiation to give a film with good edge anticorrosion (10 days in 5% aq. NaCl soln.) or a pressure sensitive adhesive, resp.

ST isobutylene methylstyrene rubber modification; halogenation radical methylstyrene isobutylene polymer; nucleophilic substitution bromomethylstyrene isobutylene polymer; anticorrosion edge coating isobutylene rubber; lithog coating functionalized isobutylene rubber; radiation curable functionalized isobutylene rubber; pressure sensitive

- adhesive functional isobutylene rubber
- IT Tackifiers
  - (functionalized haloalkylstyrene-contg. isobutylene polymer rubbers and, in manuf. of adhesives)
- IT Substitution reaction, nucleophilic
  - (of brominated or chlorinated alkylstyrene-contg. isobutylene polymer rubbers, for coatings or adhesives)
- IT Phosphonium compounds
  - RL: USES (Uses)
  - (polymers of brominated or chlorinated isobutylene-methylstyrene copolymer rubbers, for coatings)
- IT Coating materials
  - (anticorrosive, radiation-curable, functionalized haloalkylstyrene-contg. isobutylene polymer rubbers for, manuf. of)
- IT Bromination
  - Chlorination
  - (homolytic, of alkylstyrene-isobutylene polymer rubbers, for further nucleophilic substitution)
- IT Rubber, synthetic
  - RL: USES (Uses)
  - (isobutylene-methylstyrene, brominated or chlorinated, further reaction with nucleophiles, for coatings or adhesives)
- IT Adhesives
  - (photocurable, pressure-sensitive, functionalized haloalkylstyrene-contg. isobutylene polymer rubbers for, manuf. of)
- IT Quaternary ammonium compounds, polymers
  - RL: USES (Uses)
  - (polymers, with brominated or chlorinated isobutylene-methylstyrene copolymer rubbers, for coatings)
- IT Aldehydes, compounds
  - Carboxylic acids, compounds
  - Ketones, compounds
  - RL: USES (Uses)
  - (reaction products, with brominated or chlorinated isobutylene-methylstyrene copolymer, rubber, for coatings)
- IT Amines, compounds
  - RL: USES (Uses)
  - (tertiary, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer, rubber, for coatings)
- IT Fatty acids, compounds
  - RL: USES (Uses)
  - (tung-oil, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer, rubber, for coatings)
- IT 7726-95-6
  - RL: USES (Uses)
  - (bromination, homolytic, of alkylstyrene-isobutylene polymer rubbers, for further nucleophilic substitution)
- IT 65-85-ODP, Benzoic acid, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 66-99-9DP, .beta.-Naphthaldehyde, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 82-05-3DP, Benzanthrone, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 84-65-1DP, Anthraquinone, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 85-52-9DP, 2-Benzoyl benzoic acid, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 90-94-8DP, Michler's ketone, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 93-08-3DP, .beta.-Acetonaphthone, reaction products with brominated or chlorinated

isobutylene-methylstyrene copolymer 93-55-ODP, Propiophenone, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 94-41-7DP, Benzylidene acetophenone, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 98-86-2DP, Acetophenone, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 100-52-7DP, Benzaldehyde, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 106-51-4DP, 2,5-Cyclohexadiene-1,4-dione, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 117-78-2DP, Anthraquinone-2-carboxylic acid, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 119-53-9DP, Benzoin, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 119-61-9DP, Benzophenone, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 121-44-8DP, Triethylamine, salts with brominated or chlorinated isobutylene-methylstyrene copolymer 131-09-9DP, 2-Chloroanthraquinone, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 134-81-6DP, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 134-85-0DP, 4-Chlorobenzophenone, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 148-18-5DP, Sodium diethyl dithiocarbamate, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 447-31-4DP, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 451-40-1DP, Deoxybenzoin, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 463-40-1DP, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 486-25-9DP, Fluorenone, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 492-22-8DP, 9H-Thioxanthen-9-one, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 554-70-1DP, Triethylphosphine, salts with brominated or chlorinated isobutylene-methylstyrene copolymer 555-68-0DP, m-Nitrocinnamic acid, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 579-18-0DP, 3-Benzoylbenzoic acid, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 600-14-6DP, 2,3-Pentanedione, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 611-95-0DP, 4-Benzoyl benzoic acid, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 621-82-9DP, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 644-13-3DP, .beta.-Naphthylphenyl ketone, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 830-09-1DP, p-Methoxycinnamic acid, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 1011-92-3DP, .alpha.-Cyanocinnamic acid, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 1137-42-4DP, 4-Hydroxybenzophenone, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 1552-94-9DP, Cinnamylideneacetic acid, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 1615-02-7DP, p-Chlorocinnamic acid, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 3481-02-5DP, Cyclopropyl phenyl ketone, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 3654-49-7DP, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 4472-92-8DP, Cinnamylidenemalononic acid, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 5335-33-1DP, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer

**6427-66-3DP**, p-Azidobenzoic acid, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 12679-43-5DP, Naphthaquinone, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 13026-12-5DP, .beta.-(1)-Naphthylacrylic acid, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 16323-43-6DP, p-Phenylenebis(acrylic acid), reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 17202-49-2DP, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 24139-57-9DP, .alpha.-Cyanocinnamylidene-acetic acid, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 47174-43-6DP, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 58177-53-0DP, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 61128-14-1DP, brominated or chlorinated, reaction products with amines or phosphines or carboxylic acid (derivs.) or thiocarbamates 69766-42-3DP, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 146108-68-1DP, reaction products with nucleophiles 146108-69-2DP, reaction products with nucleophiles 146108-70-5P 146108-71-6P 146108-72-7P 146108-73-8P 146108-74-9P 146108-76-1P 146108-78-3P 146108-80-7P 146108-81-8P 146108-83-0P 146108-85-2P

RL: **PREP (Preparation)**

(rubber, manuf. of, radiation-curable, for coatings or adhesives)

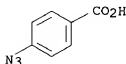
IT **6427-66-3DP**, p-Azidobenzoic acid, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer

RL: **PREP (Preparation)**

(rubber, manuf. of, radiation-curable, for coatings or adhesives)

RN 6427-66-3 HCAPLUS

CN Benzoic acid, 4-azido- (9CI) (CA INDEX NAME)



L59 ANSWER 42 OF 55 HCAPLUS COPYRIGHT 2003 ACS

AN 1993:104952 HCAPLUS

DN 118:104952

TI Radiation-curable isobutylene copolymers for lithographic and corrosion-resistant coating applications

IN Audett, Jay Douglas; McElrath, Kenneth Odell

PA Exxon Chemical Patents, Inc., USA

SO PCT Int. Appl., 118 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C09D

CC 42-10 (Coatings, Inks, and Related Products)

Section cross-reference(s): 39

FAN.CNT 16

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9211322	A2	19920709	WO 1991-US9649	19911219
	WO 9211322	A3	19920806		
	W: JP				

	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE
AT	140465 E 19960815 AT 1990-905077 19891120
ES	2090128 T3 19961016 ES 1990-905077 19891120
EP	563251 A1 19931006 EP 1992-903000 19911219
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE
JP	06504628 T2 19940526 JP 1991-503210 19911219
US	5376503 A 19941227 US 1992-982104 19921124
US	5585225 A 19961217 US 1994-298450 19941027
US	5585416 A 19961217 US 1995-478303 19950607
US	5587261 A 19961224 US 1995-473854 19950607
US	5591551 A 19970107 US 1995-474870 19950607
PRAI	US 1990-631610 A 19901220
	EP 1990-905077 A 19891120
	WO 1991-US9649 W 19911219
	US 1992-982104 A3 19921124
	US 1994-298450 A3 19941027
AB	The title polymers are prep'd. from C4-7 isoolefins and p-alkylstyrenes (A) with radiation-reactive functional groups, optionally nonreactive groups, at the p-alkyl groups of A. Thus, a 97.5:2.5 mol% isobutylene-p-methylstyrene copolymer (I) was brominated at 40.degree. under light to form a I contg. 0.9 mol% benzylic bromide group, which can be further reacted with Et3N, Et3P, Na di-Et dithiocarbamate, carboxylic acid (esters), fatty acid (esters), and photoinitiator derivs. A PhMe soln. of I-4-hydroxybenzophenone reaction product was formed as a 1-mil film on a steel plate and exposed under 0.24-J/cm2 UV radiation to give a film with good edge anticorrosion (10 days in 5% aq. NaCl soln.) or coated on a cardboard substrate and irradiated with UV light in a pattern to form sharp lithog. images.
ST	isobutylene methylstyrene rubber modification; halogenation radical methylstyrene isobutylene polymer; nucleophilic substitution bromomethylstyrene isobutylene polymer; anticorrosion edge coating isobutylene rubber; lithog coating functionalized isobutylene rubber; radiation curable functionalized isobutylene rubber
IT	Substitution reaction, nucleophilic (of brominated or chlorinated alkylstyrene-contg. isobutylene polymer rubbers, for coatings or lithog. resists)
IT	Phosphonium compounds RL: USES (Uses) (of brominated or chlorinated isobutylene-methylstyrene copolymer rubbers, for coatings)
IT	Coating materials (anticorrosive, radiation-curable, functionalized haloalkylstyrene-contg. isobutylene polymer rubbers for, manuf. of)
IT	Coating materials (electron-beam-curable, functionalized haloalkylstyrene-contg. isobutylene polymer rubbers for, manuf. of)
IT	Bromination Chlorination (homolytic, of alkylstyrene-isobutylene polymer rubbers, for further nucleophilic substitution)
IT	Rubber, synthetic RL: USES (Uses) (isobutylene-methylstyrene, brominated or chlorinated, further reaction with nucleophiles, for coatings or lithog. resists)
IT	Resists (photo-, functionalized haloalkylstyrene-contg. isobutylene polymer rubbers, manuf. of, for lithog.)
IT	Quaternary ammonium compounds, polymers

- RL: USES (Uses)  
(polymers, with brominated or chlorinated isobutylene-methylstyrene copolymer rubbers, for coatings)
- IT Aldehydes, compounds  
Carboxylic acids, compounds  
Ketones, compounds  
RL: USES (Uses)  
(reaction products, with brominated or chlorinated isobutylene-methylstyrene copolymer, rubber, for coatings)
- IT Amines, compounds  
RL: USES (Uses)  
(tertiary, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer, rubber, for coatings)
- IT Fatty acids, compounds  
RL: USES (Uses)  
(tung-oil, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer, rubber, for coatings)
- IT 7726-95-6  
RL: USES (Uses)  
(bromination, homolytic, of alkylstyrene-isobutylene polymer rubbers, for further nucleophilic substitution)
- IT 146108-73-8P 146108-74-9P 146108-76-1P 146108-78-3P 146108-80-7P  
146108-81-8P 146108-83-0P 146124-46-1P  
RL: PREP (Preparation)  
(rubber, manuf. of, by bromo- or chlorination and nucleophilic substitution, radiation-curable, for coatings and resists)
- IT 57-11-4DP, Octadecanoic acid, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 65-85-ODP, Benzoic acid, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 66-99-9DP, .beta.-Naphthaldehyde, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 82-05-3DP, Benzanthrone, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 84-65-IDP, Anthraquinone, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 85-52-9DP, 2-Benzoyl benzoic acid, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 90-94-8DP, Michler's ketone, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 93-08-3DP, .beta.-Acetonaphthone, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 93-55-ODP, Propiophenone, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 98-86-2DP, Acetophenone, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 100-52-7DP, Benzaldehyde, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 106-51-4DP, 2,5-Cyclohexadiene-1,4-dione, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 117-78-2DP, Anthraquinone-2-carboxylic acid, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 119-53-9DP, Benzoin, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 119-61-9DP, Benzophenone, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 131-09-9DP, 2-Chloroanthraquinone, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 134-81-6DP, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 134-85-ODP, 4-Chlorobenzophenone, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 148-18-5DP, Sodium diethyl dithiocarbamate, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer 447-31-4DP, reaction products with

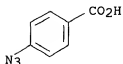
brominated or chlorinated isobutylene-methylstyrene copolymer  
 451-40-1DP, Deoxybenzoin, reaction products with brominated or chlorinated  
 isobutylene-methylstyrene copolymer 486-25-9DP, Fluorenone, reaction  
 products with brominated or chlorinated isobutylene-methylstyrene  
 copolymer 492-22-8DP, 9H-Thioxanthen-9-one, reaction products with  
 brominated or chlorinated isobutylene-methylstyrene copolymer  
 555-68-0DP, m-Nitrocinnamic acid, reaction products with brominated or  
 chlorinated isobutylene-methylstyrene copolymer 579-18-0DP,  
 3-Benzoylbenzoic acid, reaction products with brominated or chlorinated  
 isobutylene-methylstyrene copolymer 600-14-6DP, 2,3-Pentanedione,  
 reaction products with brominated or chlorinated isobutylene-methylstyrene  
 copolymer 611-95-0DP, 4-Benzoyl benzoic acid, reaction products with  
 brominated or chlorinated isobutylene-methylstyrene copolymer  
 621-82-9DP, reaction products with brominated or chlorinated  
 isobutylene-methylstyrene copolymer 644-13-3DP, .beta.-Naphthylphenyl  
 ketone, reaction products with brominated or chlorinated  
 isobutylene-methylstyrene copolymer 830-09-1DP, p-Methoxycinnamic acid,  
 reaction products with brominated or chlorinated isobutylene-methylstyrene  
 copolymer 1011-92-3DP, .alpha.-Cyanocinnamic acid, reaction products  
 with brominated or chlorinated isobutylene-methylstyrene copolymer  
 1137-42-4DP, 4-Hydroxybenzophenone, reaction products with brominated or  
 chlorinated isobutylene-methylstyrene copolymer 1552-94-9DP,  
 Cinnamylidenacetic acid, reaction products with brominated or chlorinated  
 isobutylene-methylstyrene copolymer 1615-02-7DP, p-Chlorocinnamic acid,  
 reaction products with brominated or chlorinated isobutylene-methylstyrene  
 copolymer 3101-08-4DP, Benzylidene, reaction products with brominated or  
 chlorinated isobutylene-methylstyrene copolymer 3481-02-5DP, Cyclopropyl  
 phenyl ketone, reaction products with brominated or chlorinated  
 isobutylene-methylstyrene copolymer 3654-49-7DP, reaction products with  
 brominated or chlorinated isobutylene-methylstyrene copolymer  
 4472-92-8DP, Cinnamylidenemalonic acid, reaction products with brominated  
 or chlorinated isobutylene-methylstyrene copolymer 5335-33-1DP, reaction  
 products with brominated or chlorinated isobutylene-methylstyrene  
 copolymer 6427-66-3DP, p-Azidobenzoic acid, reaction products  
 with brominated or chlorinated isobutylene-methylstyrene copolymer  
 12679-43-5DP, Naphthaquinone, reaction products with brominated or  
 chlorinated isobutylene-methylstyrene copolymer 13026-12-5DP,  
 .beta.-(1)-Naphthylacrylic acid, reaction products with brominated or  
 chlorinated isobutylene-methylstyrene copolymer 16323-43-6DP,  
 p-Phenylenebis(acrylic acid), reaction products with brominated or  
 chlorinated isobutylene-methylstyrene copolymer 17202-49-2DP, reaction  
 products with brominated or chlorinated isobutylene-methylstyrene  
 copolymer 24139-57-9DP, .alpha.-Cyanocinnamylidene-acetic acid, reaction  
 products with brominated or chlorinated isobutylene-methylstyrene  
 copolymer 47174-43-6DP, reaction products with brominated or chlorinated  
 isobutylene-methylstyrene copolymer 61128-14-1DP, brominated or  
 chlorinated, reaction products with amines or phosphines or carboxylic  
 acid (derivs.) or thiocarbamates 69766-42-3DP, reaction products with  
 brominated or chlorinated isobutylene-methylstyrene copolymer  
 107249-43-4DP, reaction products with brominated or chlorinated  
 isobutylene-methylstyrene copolymer 146108-68-1DP, reaction products  
 with nucleophiles 146108-69-2DP, reaction products with nucleophiles  
 146108-70-5P 146108-71-6P 146108-72-7P

**RL: PREP (Preparation)**

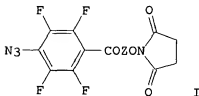
(rubber, manuf. of, radiation-curable, for anticorrosive coatings or  
 resists)

IT 121-44-8DP, Triethylamine, salts with brominated or chlorinated  
 isobutylene-methylstyrene copolymer 554-70-1DP, Triethylphosphine, salts

with brominated or chlorinated isobutylene-methylstyrene copolymer  
 RL: PREP (Preparation)  
 (rubber, manuf. of, radiation-curable, for coatings and resists)  
 IT 6427-66-3DP, p-Azidobenzoic acid, reaction products with  
 brominated or chlorinated isobutylene-methylstyrene copolymer  
 RL: PREP (Preparation)  
 (rubber, manuf. of, radiation-curable, for anticorrosive coatings or  
 resists)  
 RN 6427-66-3 HCAPLUS  
 CN Benzoic acid, 4-azido- (9CI) (CA INDEX NAME)



L59 ANSWER 43 OF 55 HCAPLUS COPYRIGHT 2003 ACS  
 AN 1993:81577 HCAPLUS  
 DN 118:81577  
 TI Photochemical functionalization of polymer surfaces and the production of  
 biomolecule-carrying micrometer-scale structures by deep-UV lithography  
 using 4-substituted perfluorophenyl azides  
 AU Yan, Mingdi; Cai, Sui Xiong; Wybourne, M. N.; Keana, John F. W.  
 CS Dep. Chem., Univ. Org., Eugene, OR, 97403, USA  
 SO Journal of the American Chemical Society (1993), 115(2), 814-16  
 CODEN: JACSAT; ISSN: 0002-7863  
 DT Journal  
 LA English  
 CC 35-8 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 37, 38, 74  
 GI

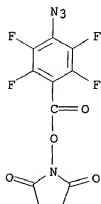


AB A general method for the covalent modification of polymer surfaces using  
 N-hydroxysuccinimide-functionalized perfluorophenyl azides [I; Z = direct  
 bond (II) or NH(CH<sub>2</sub>)<sub>4</sub>CO (III)] is reported. The active ester groups  
 become covalently attached to the polymer via photogenerated,  
 highly reactive nitrene intermediates derived from I. The  
 esters are capable of further reaction with a variety of primary  
 amine-contg. reagents including biomols. by amide formation. Thus,  
 photolysis of polystyrene (IV) or poly(3-octylthiophene) films spin-coated  
 with either II or III gave the resp. derivatized films. The  
 oxysuccinimide groups were then exposed to an aq. soln. of horseradish



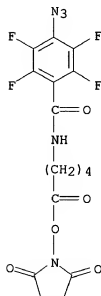
peroxidase (V), giving peroxidase-functionalized films. The extent of V immobilization on IV was 0.5 +/- 0.1 ng/mm<sup>2</sup> in the case of II and 1.0 +/- 0.2 ng/mm<sup>2</sup> in the case of III. The combination of this surface modification technique with deep-UV lithog. allowed the spatially selective introduction of oxysuccinimide groups onto the polymer film. The delineation of functionalized micron-size patterns was detected by reaction of the attached oxysuccinimide groups with 5-(aminoacetamido)fluorescein followed by fluorescence microscopy. The spin-coating/photolysis method was also used for the surface modification of preformed IV microstructures. In the latter expts. the amine used was N-(5-aminopentyl)biotinamide and fluorescence detection was accomplished using the complex formed between the surface-immobilized biotin and fluorescein-avidin.

- ST oxysuccinimide functionalization polystyrene; peroxidase functionalization polystyrene; polyoctylthiophene oxysuccinimide functionalization
- IT Fluoropolymers  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and photolithog. properties of)
- IT Lithography  
(photo-, UV, submicron, oxysuccinimide-functionalized polystyrene for)
- IT 9003-99-ODP, Peroxidase, reaction products with polystyrene oxysuccinimide derivs.  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and characterization of)
- IT 9003-53-6DP, Polystyrene, oxysuccinimide and peroxidase derivs. 104934-51-2DP, Poly(3-octylthiophene), oxysuccinimide derivs. **126695-58-7DP**, reaction products with polystyrene and poly(3-octylthiophene) **145708-89-ODP**, reaction products with polystyrene and poly(3-octylthiophene)  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of, photochem.)
- IT **126695-58-7DP**, reaction products with polystyrene and poly(3-octylthiophene) **145708-89-ODP**, reaction products with polystyrene and poly(3-octylthiophene)  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of, photochem.)
- RN 126695-58-7 HCAPLUS
- CN 2,5-Pyrrolidinedione, 1-[(4-azido-2,3,5,6-tetrafluorobenzoyl)oxy]- (9CI)  
(CA INDEX NAME)



RN 145708-89-0 HCAPLUS

CN Benzamide, 4-azido-N-[5-[(2,5-dioxo-1-pyrrolidinyl)oxy]-5-oxopentyl]-2,3,5,6-tetrafluoro- (9CI) (CA INDEX NAME)



L59 ANSWER 44 OF 55 HCAPLUS COPYRIGHT 2003 ACS

AN 1992:428344 HCAPLUS

DN 117:28344

TI Process for modifying surfaces

IN Matsuda, Takehisa; Sugawara, Takashi; Inoue, Kazuhiko; Tani, Nobutaka

PA Kanegafuchi Chemical Industry Co., Ltd., Japan

SO Eur. Pat. Appl., 9 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM C08J007-12

ICS C03C017-28; C03C017-32; C08J007-04

ICA C07C247-16; C08F212-14; C08F220-36

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 42

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 472936	A2	19920304	EP 1991-112843	19910731
	EP 472936	A3	19920819		
	EP 472936	B1	19971001		
	R: DE, FR, GB				
	JP 03103264	A2	19910430	JP 1989-248440	19890925
	JP 09103481	A2	19970422	JP 1996-275101	19890925
	EP 397130	A2	19901114	EP 1990-108716	19900509
	EP 397130	A3	19901212		
	EP 397130	B1	19950419		
	R: DE, FR, GB				
	US 5128170	A	19920707	US 1990-520902	19900509
	JP 04090877	A2	19920324	JP 1990-206573	19900802
	JP 3056512	B2	20000626		

US 5240747 A 19930831 US 1991-739353 19910802

PRAI JP 1989-118222 B2 19890511  
 JP 1989-248440 19890925  
 JP 1990-206573 19900802  
 JP 1989-140576 19890601  
 US 1990-520902 A2 19900509

AB The process, esp. for biocompatibility in the medical field, comprises (1) coating an azido compd. on the material surface, (2) applying the modifier on or absorbing in the coated surface, (3) irradiating with UV rays, and (4) removing unfixed modifier. Thus, on a poly(ethylene terephthalate) (I) film (surface area 2 cm<sup>2</sup>) was cast 20 .mu.L 1% azidostyrene-styrene copolymer soln. in acetone to give a 1-.mu.m film. Immersing 1 h in 5% albumin soln. in H3PO4 buffer and UV-irradiating gave a film, which was washed and dried to show by ESCA that albumin was fixed to the coated I.

ST azide compd biocompatibility coating film; polyethylene terephthalate coating albumin; photochem coating film

IT Azides  
 RL: USES (Uses)  
 (applying of, on substrates, for photochem. fixing of biocompatible top coatings)

IT Albumins, uses  
 Enzymes  
 Polymers, uses  
 Polysaccharides, uses  
 Proteins, uses  
 RL: USES (Uses)  
 (coating of, on photochem. activated azide primers, for biocompatibility)

IT Medical goods  
 (devices for, biocompatible, azide compds. in coating of)

IT Glass, oxide  
 RL: USES (Uses)  
 (primer azide coatings on, UV-activated, for biocompatible top coatings)

IT Coating process  
 (photochem., primer azide coatings on, UV-activated, for biocompatible top coatings)

IT 25322-68-3 26793-34-0, Poly(N,N-dimethylacrylamide)  
 RL: USES (Uses)  
 (coating of, on photochem. activated azide primers, for biocompatibility)

IT 7440-50-8, Copper, uses  
 RL: USES (Uses)  
 (film, coating of fibronectin on, photochem. activated azide primers for)

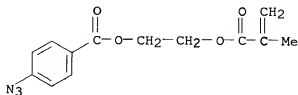
IT 25038-59-9, uses  
 RL: USES (Uses)  
 (film, photochem. activated azide primers on, for biocompatible top coatings)

IT 55025-80-4P 73847-62-8P, 3-Azidostyrene  
 RL: RCT (Reactant); **PREP (Preparation)**; RACT (Reactant or reagent)  
 (prepn. and polymn. of)

IT 142281-00-3P  
 RL: **PREP (Preparation)**  
 (prepn. of, for UV-primers for biocompatible top coatings)

IT 12597-68-1, Stainless steel, uses  
 RL: USES (Uses)

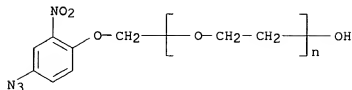
- (primer azide coatings on, UV-activated, for biocompatible top coatings)
- IT 55025-81-5  
RL: USES (Uses)  
(primer, UV-activated, on polyester film, for biocompatible top coatings)
- IT 868-77-9  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with azidobenzoyl chloride)
- IT 6427-66-3, p-Azidobenzoic acid  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with iso-Bu chloroformate)
- IT 73847-53-7, 3-Aminostyrene hydrochloride  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with sodium nitrite, and azide)
- IT 543-27-1, Isobutyl chloroformate  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with triethylamine and iso-Bu chloroformate)
- IT 586-39-0, 3-Nitrostyrene  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(redn. of)
- IT 55025-80-4P  
RL: RCT (Reactant); **PREP (Preparation)**; RACT (Reactant or reagent)  
(prepn. and polymn. of)
- RN 55025-80-4 HCAPLUS
- CN Benzoic acid, 4-azido-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester (9CI) (CA INDEX NAME)



- L59 ANSWER 45 OF 55 HCAPLUS COPYRIGHT 2003 ACS
- AN 1992:201042 HCAPLUS
- DN 116:201042
- TI Synthesis of photoreactive poly(ethylene glycol) and its application to the prevention of surface-induced platelet activation
- AU Tseng, Y. C.; Park, K.
- CS Sch. Pharm., Purdue Univ., West Lafayette, IN, 47907, USA
- SO Journal of Biomedical Materials Research (1992), 26(3), 373-91
- CODEN: JBMRBG; ISSN: 0021-9304
- DT Journal
- LA English
- CC 63-7 (Pharmaceuticals)
- Section cross-reference(s): 35
- AB Photoreactive poly(ethylene glycol) (PEG) was synthesized by reacting 4-fluoro-3-nitrophenyl azide (FNPA) with sodium salt of PEG. The synthesized 4-azido-2-nitrophenyl PEG (ANP-PEG) was characterized by <sup>1</sup>H-NMR, IR, and UV spectroscopy. ANP-PEG was grafted to dimethyldichlorosilane-coated glass (DDS-glass) by photolysis without any premodification of the surface. The effects of various grafting factors,

such as the polymer adsorption time, concn. of ANP-PEG, and UV irradiation time, on the PEG grafting efficiency were examined. The PEG-grafted DDS-glass was characterized by measuring surface free energies, surface-induced platelet activation, and the relative amount of PEG grafted on the surface using ESCA. Platelet adhesion and activation was analyzed by measuring the number and spread area of adherent platelets. The results showed that ANP-PEG had to be adsorbed onto DDS-glass for at least 12 h before photolysis for the maximum grafting efficiency. No platelets could adhere to the PEG-grafted DDS-glass, if the bulk concentration of ANP-PEG in the adsorption solution was between 1 and 10 mg/mL. Above 10 mg/mL, platelet activation gradually increased and reached the maximum at 30 mg/mL. Data indicate that the grafting of ANP-PEG requires careful control of the grafting conditions and that the grafted PEG can prevent surface-induced platelet activation.

- ST photoreactive PEG surface platelet activation; azidonitrophenyl PEG surface platelet activation
- IT Glass, oxide  
 RL: BIOL (Biological study)  
 (dimethyldichlorosilane-coated, photoreactive PEG grafted onto, for prevention of surface-induced platelet activation)
- IT Adsorption  
 (of blood platelets, photoreactive PEG grafted on silanated glass for prevention of surface-induced)
- IT Contact angle  
 (of photoreactive PEG grafted on silanated glass, platelet activation in relation to)
- IT Blood platelet  
 (photoreactive PEG for prevention of surface-induced activation of)
- IT Photolysis  
 (photoreactive PEG grafting on silanated glass in relation to)
- IT Ultraviolet radiation  
 (photoreactive PEG grafting on silanated glass in relation to time of)
- IT Interfacial energy  
 (platelet activation of photoreactive PEG grafted on silanated glass in relation to)
- IT 75-78-5, Dimethyldichlorosilane  
 RL: BIOL (Biological study)  
 (glass coated with, photoreactive PEG grafted onto, for prevention of surface-induced platelet activation)
- IT 140842-24-6P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of, for prevention of surface-induced platelet activation)
- IT 25322-68-3  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with fluoronitrophenyl azide, for prevention of surface-induced platelet activation)
- IT 28166-06-5, 4-Fluoro-3-nitrophenyl azide  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with polyethylene glycol)
- IT 140842-24-6P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of, for prevention of surface-induced platelet activation)
- RN 140842-24-6 HCAPLUS
- CN Poly(oxy-1,2-ethanediyl), .alpha.-[(4-azido-2-nitrophenoxy)methyl]-.omega.-hydroxy- (9CI) (CA INDEX NAME)



L59 ANSWER 46 OF 55 HCAPLUS COPYRIGHT 2003 ACS

AN 1991:425568 HCAPLUS

DN 115:25568

TI Immobilization of proteins and peptides on insoluble supports for sequencing and other applications

IN Pappin, Darryl J. C.; Coull, James M.; Koester, Hubert

PA Millipore Corp., USA

SO Eur. Pat. Appl., 18 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM G01N033-68

ICA G01N033-549; G01N033-545

CC 9-15 (Biochemical Methods)

Section cross-reference(s): 34

FAN.CMT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 410323	A2	19910130	EP 1990-113972	19900720
	EP 410323	A3	19920408		
	R: DE, FR, GB, IT, NL, SE				
	US 5071909	A	19911210	US 1989-385711	19890726
	JP 03141300	A2	19910617	JP 1990-194113	19900724
PRAI	US 1989-385711		19890726		

AB A peptide or protein is immobilized onto a flat, microporous membrane by (1) adsorbing the peptide or protein and a crosslinkable polymer onto the membrane surface, and (2) crosslinking the polymer to produce a polymer network entrapping the protein or peptide therein. The immobilized peptide or protein is suitable for sequence anal. or other chem. or enzymic processes. Thus, a polyvinylidene difluoride membrane disk contg. electroblotted .beta.-lactoglobulin A and stained with sulforhodamine B was treated with diisopropyl-carbodiimide and methylenedianiline (polymer crosslinking agent), dried, then treated with polyacrylic acid (5000 mol. wt.). The prepd. disk was subjected to 20 cycles of Edman degradn. The initial sequencing yield was 35 pmol and the repetitive yield 90%.

ST protein peptide immobilization membrane polymer; sequencing protein membrane immobilization polymer; lactoglobulin sequencing membrane immobilization polyacrylate

IT Polymers, uses and miscellaneous

RL: USES (Uses)

(crosslinkable, in protein or peptide immobilization on microporous membrane)

IT Protein sequences

(detrn. of, protein or peptide immobilization on microporous membrane with crosslinkable polymer for)

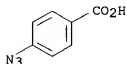
IT Crosslinking agents

Ultraviolet radiation

(for polymer crosslinking for protein or peptide immobilization on

- microporous membrane)
- IT Peptides, biological studies  
Proteins, biological studies  
RL: BIOL (Biological study)  
(immobilization of, on microporous membrane, crosslinkable polymer in)
- IT Amines, uses and miscellaneous  
RL: USES (Uses)  
(in protein or peptide immobilization on microporous membrane)
- IT Immobilization, biochemical  
(of peptides and proteins on microporous membrane, crosslinkable polymer in)
- IT Paper  
Glass, oxide  
Metals, uses and miscellaneous  
Polycarbonates, uses and miscellaneous  
Polyesters, uses and miscellaneous  
Polysulfones, uses and miscellaneous  
Zeolites, uses and miscellaneous  
RL: ANST (Analytical study)  
(protein or peptide immobilization on microporous membrane of, crosslinkable polymer in)
- IT Edman degradation  
(protein or peptide immobilization on microporous membrane with crosslinkable polymer for)
- IT Myoglobins  
RL: ANST (Analytical study)  
(sequencing of, immobilization on polyvinylidene difluoride membrane with polyallylamine hydrochloride for)
- IT Membranes  
(microporous, protein or peptide immobilization on, crosslinkable polymer in)
- IT Lactoglobulins  
RL: ANST (Analytical study)  
(.beta.-, A, sequencing of, immobilization on polyvinylidene difluoride membrane with polyallylamine hydrochloride for)
- IT 101-77-9, Methylenedianiline 621-95-4 4044-65-9, 1,4-Phenylenediisothiocyanate 41380-75-0, Diaminostilbene  
RL: ANST (Analytical study)  
(for polymer crosslinking for protein or peptide immobilization on microporous membrane)
- IT 71550-12-4  
RL: ANST (Analytical study)  
(in myoglobin or .beta.-lactoglobulin A immobilization on polyvinylidene difluoride membrane for sequencing)
- IT 9003-01-4, Poly(acrylic acid) 25087-26-7, Poly(methacrylic acid) 26336-38-9, Polyvinylamine 26913-06-4, Poly[imino(1,2-ethanediy)] 30551-89-4, Polyallylamine  
RL: ANST (Analytical study)  
(in protein or peptide immobilization on microporous membrane)
- IT 26913-06-4DP, Poly[imino(1,2-ethanediy)], azido derivs.  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of, for protein immobilization on membrane)
- IT 6427-66-3P, p-Azidobenzoic acid  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of, in polymer prepn. for protein immobilization on membrane)
- IT 9003-53-6, Polystyrene 9004-35-7, Cellulose acetate 9004-70-0, Nitrocellulose 24937-79-9, Polyvinylidene difluoride 1344-28-1, Alumina, biological studies 7631-86-9, Silica, biological studies

9002-84-0, Teflon  
 RL: ANST (Analytical study)  
 (protein or peptide immobilization on microporous membrane of,  
 crosslinkable polymer in)  
 IT 150-13-0, p-Aminobenzoic acid  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, in polymer prepn. for protein  
 immobilization on membrane)  
 IT 6427-66-3P, p-Azidobenzoic acid  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of, in polymer prepn. for protein immobilization on membrane)  
 RN 6427-66-3 HCAPLUS  
 CN Benzoic acid, 4-azido- (9CI) (CA INDEX NAME)



L59 ANSWER 47 OF 55 HCAPLUS COPYRIGHT 2003 ACS  
 AN 1989:549327 HCAPLUS  
 DN 111:149327  
 TI Inactivation of DNA polymerase I (Klenow fragment) by adenosine  
 2',3'-epoxide 5'-triphosphate: evidence for the formation of a  
 tight-binding inhibitor  
 AU Catalano, Carlos Enrique; Benkovic, Stephen J.  
 CS Dep. Chem., Pennsylvania State Univ., University Park, PA, 16802, USA  
 SO Biochemistry (1989), 28(10), 4374-82  
 CODEN: BICHAW; ISSN: 0006-2960  
 DT Journal  
 LA English  
 CC 7-3 (Enzymes)  
 AB The mechanism of the inactivation of Escherichia coli DNA polymerase I by  
 epoxy-ATP was examd. in detail by utilizing a synthetic DNA  
 template-primer of defined sequence. Epoxy-ATP inactivates the large  
 fragment of DNA polymerase I (the Klenow fragment) in a time- and  
 concn.-dependent manner ( $K_i = 21 \text{ .}\mu\text{M}$ ;  $k_{\text{inact}} = 0.021 \text{ s}^{-1}$ ). Concomitant  
 with inactivation is the incorporation of epoxy-AMP into the primer  
 strand. The elongated DNA duplex directly inhibits the polymerase  
 activity of the enzyme (no time dependence) and is resistant to degradn. by  
 the 3' .fwdarw. 5' exonuclease and pyrophosphorylase activities of the  
 enzyme. Inactivation of the enzyme results from slow ( $4 \text{ .times. } 10^{-4} \text{ s}^{-1}$ )  
 dissocn. of the intact epoxy-terminated template-primer from the enzyme  
 and is thus characterized as a tight-binding inhibition. Surprisingly,  
 while the polymerase activity of the enzyme is completely suppressed by  
 epoxy-ATP, the 3' .fwdarw. 5' exonuclease activity remains intact. The  
 data presented demonstrate that even though the polymerase site is  
 occupied with duplex DNA, the enzyme can bind a 2nd DNA duplex and carry  
 out exonucleolytic cleavage.  
 ST DNA polymerase I epoxy ATP mechanism; Klenow fragment DNA polymerase epoxy  
 ATP  
 IT Deoxyribonucleic acids  
 RL: BIOL (Biological study)  
 (disso. of, from DNA polymerase I Klenow fragment after enzyme  
 inactivation by epoxy-ATP, kinetics of)



IT Kinetics, enzymic  
(of inactivation, of DNA polymerase I Klenow fragment, by epoxy-ATP)

IT 61468-92-6  
RL: BIOL (Biological study)  
(DNA polymerase I Klenow fragment inactivation by, mechanism of)

IT 1927-31-7  
RL: BIOL (Biological study)  
(DNA polymerase I Klenow fragment protection by, against inactivation  
by epoxy-ATP)

IT 79393-91-2  
RL: BIOL (Biological study)  
(DNA polymerase I Klenow fragment with activity of, enzyme inactivation  
by epoxy-ATP in relation to)

IT 120022-85-7  
RL: PROC (Process)  
(DNA template-primer incorporation of, in DNA polymerase I Klenow  
fragment inactivation by epoxy-ATP)

IT 9012-90-2, DNA polymerase  
RL: BIOL (Biological study)  
(I, Klenow fragment of, inactivation of, by epoxy-ATP, mechanism of)

IT 111378-64-4 111378-65-5 120144-21-0  
RL: BIOL (Biological study)  
(as DNA template-primer, for DNA polymerase I Klenow fragment, enzyme  
inactivation by epoxy-ATP in relation to)

IT 111309-58-1P 111309-63-8P 111378-63-3P 112725-71-0P  
RL: **SPN (Synthetic preparation); PREP (Preparation)**  
(prepn. and complexation with complementary oligomer)

IT 120144-31-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(**reaction** of, with DNA **polymerase I Klenow**  
fragment, kinetics of)

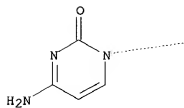
IT 112725-71-0P  
RL: **SPN (Synthetic preparation); PREP (Preparation)**  
(prepn. and complexation with complementary oligomer)

RN 112725-71-0 HCAPLUS

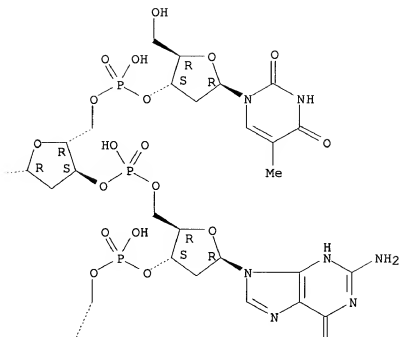
CN Thymidine, 2'-deoxycytidyl-(5'.fwdarw.3')-5-[3-(5-azido-2-  
nitrobenzoyl)amino]propyl]-2'-deoxyuridyl-(5'.fwdarw.3')-2'-  
deoxyguanylyl-(5'.fwdarw.3')-2'-deoxycytidyl-(5'.fwdarw.3')-2'-  
deoxycytidyl-(5'.fwdarw.3')-2'-deoxyguanylyl-(5'.fwdarw.3')-2'-  
deoxyadenyl-(5'.fwdarw.3')-2'-deoxycytidyl-(5'.fwdarw.3')-2'-  
deoxyguanylyl-(5'.fwdarw.3')-2'-deoxycytidyl-(5'.fwdarw.3')- (9CI) (CA  
INDEX NAME)

Absolute stereochemistry.

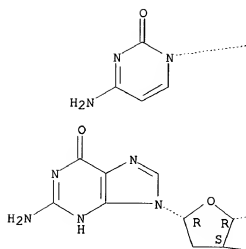
PAGE 1-A



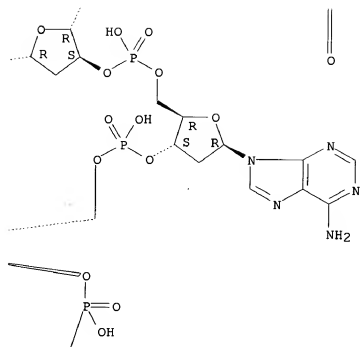
PAGE 1-B



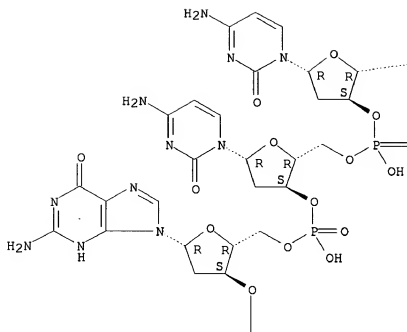
PAGE 2-A



PAGE 2-B



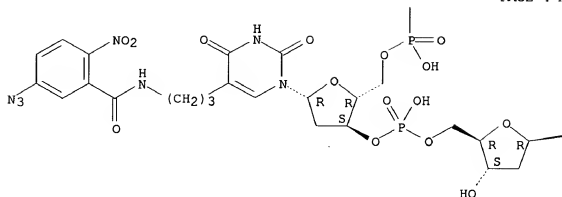
PAGE 3-A



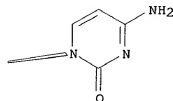
PAGE 3-B



PAGE 4-A



PAGE 4-B

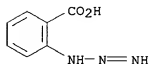


L59 ANSWER 48 OF 55 HCAPLUS COPYRIGHT 2003 ACS  
 AN 1987:515334 HCAPLUS  
 DN 107:115334  
 TI Arynic species. II. Tosyl and triazene as leaving group in the generation of arynes from polymer-bound reagents  
 AU Gavina, F.; Luis, S. V.; Ferrer, P.; Costero, A. M.; Gil, P.  
 CS Col. Univ. Castellon, Univ. Valencia, Castellon de la Plana, Spain  
 SO Tetrahedron (1986), 42(20), 5641-8  
 CODEN: TETRAB; ISSN: 0040-4020  
 DT Journal  
 LA English  
 CC 25-24 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)  
 OS CASREACT 107:115334  
 GI

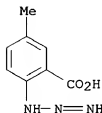


- AB Benzyne I (R = H, Me, Cl, Br) were generated in the thermal decompn. of two new kinds of polymer-bound precursors, i.e. 1-(2-carboxyaryl)triazenes and 2-carboxyarylsulfonates. Cycloaddn. of I with furoic acid gave 1-naphthol derivs. New kinds of polymer-bound trapping agents for I were used.
- ST decompn thermal polymer bound carboxyaryltriazene; carboxyaryl sulfonate polymer bound thermolysis; cycloaddn aryne furoate polymer support; naphthol
- IT Cycloaddition reaction  
(of benzyne and furoic acid, on polymer support)
- IT Thermal decomposition  
(of polymer-bound (carboxyaryl)triazenes and sulfonates, arynes from)
- IT 9003-70-7D, aminomethylated  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(coupling of, with carboxyaryldiazonium salts)
- IT 50-85-1, 4-Methylsalicylic acid 69-72-7, reactions 567-61-3,  
6-Methylsalicylic acid  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(coupling of, with chlorosulfonated macroreticular polymer)
- IT 26447-28-9, Furoic acid  
RL: PROC (Process)  
(cycloaddn. of, with aminomethylated polymer-bound arynes)
- IT 110-00-9, Furan  
RL: PROC (Process)  
(cycloaddn. of, with methylantranilic acid)
- IT 118-92-3 635-21-2, 5-Chloroanthranilic acid 2941-78-8,  
5-Methylantranilic acid 5794-88-7, 5-Bromoanthranilic acid  
RL: PRP (Properties)  
(diazotization and coupling of, with aminomethylated polymer)
- IT 4389-45-1, 3-Methylantranilic acid  
RL: PROC (Process)  
(diazotization cycloaddn. of, with furan)
- IT 88-14-2D, 2-Furancarboxylic acid, **polymer-bound** 107-95-9D,  
.beta.-Alanine, **polymer-bound** 9003-70-7D, Polystyrene-  
divinylbenzene copolymer, hydroxymethylated  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(phase transfer **reaction** of, with benzyne)
- IT 19061-32-6P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(prepn. and hydrolysis of)
- IT 69-72-7DP, reaction products with chlorosulfonylated styrene-  
divinylbenzene copolymer in pyridine 83-40-9DP, reaction products with  
chlorosulfonylated styrene-divinylbenzene copolymer in pyridine  
89-56-5DP, reaction products with chlorosulfonylated styrene-  
divinylbenzene copolymer in pyridine 90-15-3P, 1-Naphthol 5652-38-0P  
6939-33-9P, 7-Methyl-1-naphthol 24894-78-8P, 6-Methyl-1-naphthol  
32849-41-5P, 8-Methyl-1-naphthol 51149-87-2P, 5-Methyl-1-naphthol  
56820-58-7P, 7-Chloro-1-naphthol 56820-70-3P, 6-Chloro-1-naphthol  
62750-11-2P 91270-68-7P, 6-Bromo-1-naphthol 91270-69-8P,  
7-Bromo-1-naphthol  
RL: RCT (Synthetic preparation); PREP (Preparation)  
(prepn. of)
- IT 108-95-2P, Phenol, preparation  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of, via polymer bound reagent)
- IT 110138-18-6DP, polymer-bound 110138-19-7DP,  
polymer-bound 110138-20-ODP, polymer-bound 110138-21-1DP

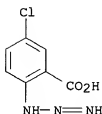
- , polymer-bound  
 RL: **SPN (Synthetic preparation); PREP (Preparation)**  
 (prepn., thermolysis, and cycloaddn. of with furoic acid)  
 IT 50-85-1DP, 4-Methylsalicylic acid, chlorosulfonated polymer-bound  
 69-72-7DP, chlorosulfonated polymer-bound 567-61-3DP, 6-Methylsalicylic  
 acid, chlorosulfonated polymer-bound  
 RL: **SPN (Synthetic preparation); PREP (Preparation)**  
 (prepn., thermolysis, phase transfer, and cycloaddn. of with furoic  
 acid)  
 IT 9003-70-7D, Polystyrene-divinylbenzene copolymer, chlorosulfonylated  
 RL: **RCT (Reactant); RACT (Reactant or reagent)**  
 (reaction of, with salicylic acids)  
 IT **110138-18-6DP**, polymer-bound **110138-19-7DP**,  
 polymer-bound **110138-20-ODP**, polymer-bound **110138-21-1DP**  
 , polymer-bound  
 RL: **SPN (Synthetic preparation); PREP (Preparation)**  
 (prepn., thermolysis, and cycloaddn. of with furoic acid)  
 RN 110138-18-6 HCAPLUS  
 CN Benzoic acid, 2-(1-triazenyl)- (9CI) (CA INDEX NAME)



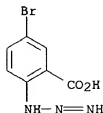
- RN 110138-19-7 HCAPLUS  
 CN Benzoic acid, 5-methyl-2-(1-triazenyl)- (9CI) (CA INDEX NAME)



- RN 110138-20-0 HCAPLUS  
 CN Benzoic acid, 5-chloro-2-(1-triazenyl)- (9CI) (CA INDEX NAME)



- RN 110138-21-1 HCAPLUS  
 CN Benzoic acid, 5-bromo-2-(1-triazenyl)- (9CI) (CA INDEX NAME)



- L59 ANSWER 49 OF 55 HCAPLUS COPYRIGHT 2003 ACS  
 AN 1986:105034 HCAPLUS  
 DN 104:105034  
 TI Electron microscopic visualization of the ATPase site of myosin by photoaffinity labeling with a biotinylated photoreactive ADP analog  
 AU Sutoh, Kazuo; Yamamoto, Keiichi; Wakabayashi, Takeyuki  
 CS Fac. Sci., Univ. Tokyo, Tokyo, 113, Japan  
 SO Proceedings of the National Academy of Sciences of the United States of America (1986), 83(2), 212-16  
 CODEN: PNASAG; ISSN: 0027-8424  
 DT Journal  
 LA English  
 CC 7-5 (Enzymes)  
 Section cross-reference(s): 6  
 AB An ADP analog carrying a biotin moiety and a photoreactive group was synthesized. In the presence of vanadate ion (Vi), the analog was tightly trapped into the ATPase site of heavy meromyosin (HMM) or myosin subfragment 1 (S1) in an ADP analog/ATPase site molar ratio of 1:1. UV illumination of the HMM (or S1)-Vi-ADP analog complex resulted in covalent incorporation of the analog into the ATPase site. About 15% of the trapped analog was crosslinked to HM or S1. Mapping of the crosslinking site showed that the N-terminal 25,000-dalton segment of the heavy chain participated in binding the ADP analog. The biotin moiety of covalently bound analog was visualized in electron microscopy by attaching an avidin oligomer. Rotary-shadowed images of the HMM-avidin complex revealed that the crosslinked ADP analog was located .apprx.140 .ANG. from the head-rod junction on the head. Thus, the ATPase site of myosin is .apprx.140 .ANG. from the head-rod junction along the head.  
 ST myosin ATPase electron microscopy; photoaffinity labeling myosin ATPase ADP analog  
 IT Myosins  
 RL: BIOL (Biological study)  
 (ATPase site in, electron microscopic visualization of, after photoaffinity labeling with ADP analog)  
 IT Avidins  
 RL: BIOL (Biological study)  
 (reaction products with fluorescent dye, in photoaffinity-labeled myosin ATPase visualization by electron microscopy)  
 IT 100826-95-7  
 RL: PROC (Process)  
 (biotinylation of)  
 IT 60117-34-2  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (coupling of, with biotinylated ((aminohexyl)carbamoylmethyl]-ADP)  
 IT 55145-14-7D, reaction products with avidin  
 RL: BIOL (Biological study)



(in photoaffinity-labeled myosin ATPase visualization by electron microscopy)

IT 14333-18-7

RL: BIOL (Biological study)

(myosin ATPase photoaffinity labeling in presence of)

IT 9000-83-3

RL: PROC (Process)

(of myosin, electron microscopic visualization of, after photoaffinity labeling with ADP analog)

IT 100844-62-0P

RL: SPN (Synthetic preparation); PREP (Preparation)

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      (prepn. and coupling with azidonitrobenzoate)

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IT 100844-63-1P

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. and myosin ATPase site photoaffinity labeling with)

IT 100844-63-1P

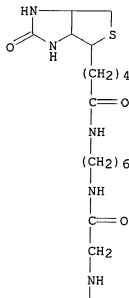
RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. and myosin ATPase site photoaffinity labeling with)

RN 100844-63-1 HCAPLUS

CN Adenosine 5'-(trihydrogen diphosphate), N-[2-[[6-[[5-(hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl)-1-oxopentyl]amino]hexyl]amino]-2-oxoethyl]-, 3'-(5-azido-2-nitrobenzoate), [3aS-(3a.alpha.,4.beta.,6a.alpha.)]- (9CI)  
(CA INDEX NAME)

PAGE 1-A

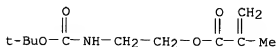




CM 1

CRN 89743-52-2

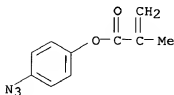
CMF C11 H19 N O4



CM 2

CRN 89743-51-1

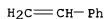
CMF C10 H9 N3 O2



CM 3

CRN 100-42-5

CMF C8 H8



L59 ANSWER 51 OF 55 HCAPLUS COPYRIGHT 2003 ACS  
 AN 1984:165465 HCAPLUS  
 DN 100:165465  
 TI Copolymer and photosensitive material containing it  
 IN Tsunoda, Takahiro; Yamaoka, Tsuguo; Ohmori, Akira; Tomihashi, Nobuyuki;  
 Tamaru, Sinji  
 PA Daikin Kogyo Co., Ltd. , Japan  
 SO Eur. Pat. Appl., 23 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 IC C08F220-28; C08F246-00; G03F007-10  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 Section cross-reference(s): 42

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	EP 96845	A2	19831228	EP 1983-105634	19830608
	EP 96845	A3	19841017		
	EP 96845	B1	19860910		

R: DE, FR, GB  
 JP 58215411 A2 19831214 JP 1982-98997 19820609  
 US 4529783 A 19850716 US 1983-502750 19830609  
 PRAI JP 1982-98997 19820609

AB F-contg. acrylic polymer is described which is useful as a photocurable material for dry offset plate fabrication, providing nonimage areas with excellent oil repellent properties. The polymer comprises (1) units of a monomer (FCRFCF2O)n-1CRFCH2OCOCRI:CH2 (I: R = CF3, F; R1 = H, Me; n = 2-7) and (2) units of an ethylenically unsatd. monomer having a photosensitive group. Thus, an Al plate support was spin-coated with a compn. contg. m-xylene hexafluoride 100 mL, a copolymer of 2-cinnamoyloxyethyl methacrylate with I (R = CF3; R1 = Me; n = 3) 5, and 5-nitroacenaphthene (sensitizer) 0.1 g to give a dry film thickness of 2 .mu., imagewise exposed to a 20 W chem. lamp for 5 min at a distance of 10 cm, developed with m-xylene hexafluoride to dissolve unexposed areas, attached to an offset printing machine (from which a roll for feeding dampening water was removed), and printing was carried out without dampening H2O by employing the offset ink KOF-Hup (Mordoooshi Ink Co., Japan) to produce 20,000 prints of excellent quality with 5-95% halftone dots of 200 lines/in. completely reproduced.

ST lithog dry plates photosensitive polymer; fluorine acrylic polymer dry lithog; oil repellent polymer lithog plate; coating photoresist fluorine acrylic polymer

IT Lithographic plates  
 (photocurable copolymer of fluorine-contg. acrylic monomer and photosensitive group-contg. monomer for fabrication of, to provide nonimage areas with excellent oil repellent properties)

IT Resists  
 (photo-, copolymer with fluorine-contg. acrylic monomer units and ethylenically unsatd. monomer units having photosensitive group as)

IT 602-87-9  
 RL: USES (Uses)  
 (photosensitive coating for prepn. of dry offset plates contg. fluorine-contg. acrylic polymer and)

IT 89777-79-7P 89777-81-1P 89777-83-3P 89777-84-4P  
 89777-85-5P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. and application of, for fabrication of dry lithog. offset plates)

IT 41261-99-8P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)

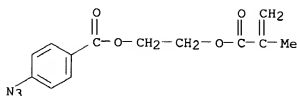
IT 89777-81-1P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. and application of, for fabrication of dry lithog. offset plates)

RN 89777-81-1 HCAPLUS

CN Benzoic acid, 4-azido-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester, polymer with 1,3-bis(trifluoromethyl)benzene and 2,3,3,3-tetrafluoro-2-[1,1,2,3,3,3-hexafluoro-2-[1,1,2,3,3,3-hexafluoro-2-(heptafluoropropoxy)propoxy]propoxy]propyl 2-methyl-2-propenoate (9CI)  
 (CA INDEX NAME)

CM 1

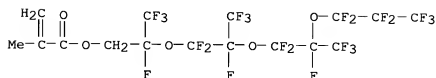
CRN 55025-80-4  
 CMF C13 H13 N3 O4



CM 2

CRN 33255-74-2

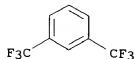
CMF C16 H7 F23 O5



CM 3

CRN 402-31-3

CMF C8 H4 F6



L59 ANSWER 52 OF 55 HCAPLUS COPYRIGHT 2003 ACS

AN 1982:20549 HCAPLUS

DN 96:20549

TI Study of photopolymers. XVI. Novel syntheses of the polymers with azidonitrobenzoyl groups and their photochemical and thermochemical reactions

AU Nishikubo, T.; Iizawa, T.; Imagawa, I.; Kobayashi, K.

CS Fac. Technol., Kanagawa Univ., Yokohama, 221, Japan

SO Journal of Polymer Science, Polymer Chemistry Edition (1981), 19(11), 2705-19

CODEN: JPLCAT; ISSN: 0449-296X

DT Journal

LA English

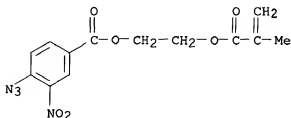
CC 35-8 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 25, 74

AB Poly[2-(2-azido-5-nitrobenzoyloxy)ethyl methacrylate] (I) and poly[2-(4-azido-3-nitrobenzoyloxy)ethyl methacrylate] (II) were synthesized by reaction of poly(hydroxyethyl methacrylate) with 2-chloro-5-nitrobenzoyl chloride [25784-91-2] and 4-chloro-3-nitrobenzoyl chloride [38818-50-7], resp., followed by NaN<sub>3</sub>. The polymers were also prepd. by homopolymer. In addn., the degradn. reaction of the

- 2-azido-5-nitrobenzoyl group in I and the transformation of the 4-azido-3-nitrobenzoyl group to the 5-carboxylbenzofurazan 1-oxide ring in II by irradiation with UV light or by heating were investigated in detail. In the photochem. reaction the reaction of the azide group in I was affected by the presence of a spacer in the polymer chain. Moreover, in the thermochem. reaction the rates of the reactions of azide groups in I and II were controlled by the facility of mol. motion and the conformation of polymer chains.
- ST azidonitrobenzoyloxyethyl methacrylate polymer; photochem reaction azido polymethacrylate; thermal reaction azido polymethacrylate
- IT Chains, chemical  
(conformation and mol. motions of, of azidonitrobenzoyl methacrylate polymers, reaction rates in relation to)
- IT Light-sensitive materials  
(polymethacrylates contg. azidonitrobenzoyl groups, prepn. and reaction of)
- IT Crosslinking  
Polymer degradation  
(photochem., of polymethacrylates contg. azidonitrobenzoyl groups)
- IT Polymerization  
(radical, of azidonitrobenzoyl methacrylates)
- IT Polymer degradation  
(thermal, of polymethacrylates contg. azidonitrobenzoyl groups)
- IT 26628-22-8  
RL: USES (Uses)  
(condensation of, with [(chloronitrobenzoyl)oxy]ethyl methacrylate)
- IT 868-77-9  
RL: USES (Uses)  
(condensation of, with chloronitrobenzoyl chloride)
- IT 25784-91-2 38818-50-7  
RL: USES (Uses)  
(condensation of, with hydroxyethyl methacrylate)
- IT 71495-45-9D, reaction products with sodium azide  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(photochem. and thermochem. reactions of)
- IT 80166-55-8P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and attempted radical polymn. of)
- IT 26628-22-8DP, reaction products with poly(hydroxyethyl methacrylate) chloronitrobenzoates 71495-47-1DP, reaction products with sodium azide 80341-66-8DP, reaction products with sodium azide 80341-67-9DP, reaction products with sodium azide  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and photochem. and thermochem. reactions of)
- IT 80166-52-5P 80166-53-6P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and reaction with sodium azide)
- IT 80166-54-7P 80191-10-2P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)
- IT 80166-55-8P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and attempted radical polymn. of)
- RN 80166-55-8 HCAPLUS

CN Benzoic acid, 4-azido-3-nitro-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester (9CI) (CA INDEX NAME)

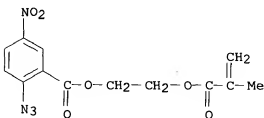


IT 80166-54-7P 80191-10-2P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

RN 80166-54-7 HCAPLUS

CN Benzoic acid, 2-azido-5-nitro-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester (9CI) (CA INDEX NAME)



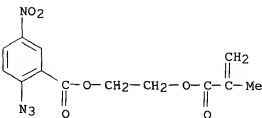
RN 80191-10-2 HCAPLUS

CN Benzoic acid, 2-azido-5-nitro-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 80166-54-7

CMF C13 H12 N4 O6



L59 ANSWER 53 OF 55 HCAPLUS COPYRIGHT 2003 ACS

AN 1978:97440 HCAPLUS

DN 88:97440

TI Photopolymerizable materials for printing plates

IN Gates, Allen Peter; Hinch, Stephen Charles; Withers, Christopher Vaughan  
 PA Vickers Ltd., UK  
 SO Ger. Offen., 34 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 IC C08F008-14  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic Processes)  
 Section cross-reference(s): 36

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2658272	A1	19770714	DE 1976-2658272	19761222
	GB 1572441	A	19800730	GB 1975-52522	19751223
	SE 7614315	A	19770624	SE 1976-14315	19761220
	SE 424642	B	19820802		
	SE 424642	C	19821111		
	BR 7608579	A	19771227	BR 1976-8579	19761221
	PL 103094	P	19790531	PL 1976-194590	19761221
	CA 1107444	A1	19810818	CA 1976-268315	19761221
	NO 7604338	A	19770624	NO 1976-4338	19761222
	FI 7603683	A	19770624	FI 1976-3683	19761222
	FI 64863	B	19830930		
	FI 64863	C	19840110		
	DK 7605799	A	19770624	DK 1976-5799	19761222
	NL 7614259	A	19770627	NL 1976-14259	19761222
	FR 2336707	A1	19770722	FR 1976-38665	19761222
	FR 2336707	B1	19830429		
	AU 7620818	A1	19780629	AU 1976-20818	19761222
	AU 510145	B2	19800612		
	CH 629314	A	19820415	CH 1976-16199	19761222
	BE 849803	A1	19770623	BE 1976-173590	19761223
	JP 52086488	A2	19770718	JP 1976-154335	19761223
	ZA 7607635	A	19771130	ZA 1976-7635	19761223
	ES 454521	A1	19771201	ES 1976-454521	19761223
	AT 7609640	A	19780715	AT 1976-9640	19761223
	AT 348552	B	19790226		
	CS 212783	P	19820326	CS 1976-8572	19761223
	US 4263394	A	19810421	US 1979-49272	19790618
PRAI	GB 1975-52522		19751223		
	US 1976-753281		19761222		
AB	Reaction products of glycidyl acrylate polymers and cinnamylidenemalononic acids are useful as photopolymerizable materials which, in their uncured form, are sol. in aq. solns. of inorg. salts. These materials are esp. useful in prep. printing plates. Thus, poly(2,3-epoxypropyl methacrylate) 5 g was dissolved in 2-butanone 100 mL and then mixed with cinnamylidenemalononic acid 9.17 and benzyltriethylammonium chloride 0.4 g. The mixt. was then heated 5 h at 80.degree., cooled, pptd. in water 2 L, and filtered off. This polymer 2 g was then dissolved in 2-butanone 100 mL, coated on a grained and anodically oxidized Al support, dried 2 min at 80.degree., exposed to a 4000-W Xe lamp through a neg., and developed in a 5.7% aq. Na metasilicate soln. to give a printing plate capable of giving many tech. satisfactory prints.				
ST	glycidyl acrylate polymer cinnamylidenemalonate photoresist; printing glycidyl acrylate polymer cinnamylidenemalonate				
IT	Printing plates (photopolymerizable compns. contg. glycidyl acrylate polymer cinnamylidenemalonate for)				



IT Resists  
(photo, photopolymerizable compns. contg. glycidyl acrylate polymer  
cinnamylidenemalonate for)

IT 99-61-6  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(Claisen-Schmidt condensation of, with acetaldehyde)

IT 75-07-0, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(Claisen-Schmidt condensation of, with nitrobenzaldehyde)

IT 54681-21-9  
RL: USES (Uses)  
(dto)

IT 65547-18-4 65547-19-5 65547-20-8 65547-21-9 65547-22-0  
65547-23-1 65547-24-2 65547-25-3 65547-26-4 65547-27-5  
65547-28-6 65547-29-7 65547-30-0 65547-31-1 65547-32-2  
RL: TEM (Technical or engineered material use); USES (Uses)  
(photopolymerizable compns. contg., for printing plates)

IT 2498-66-0 17372-87-1 65505-72-8  
RL: TEM (Technical or engineered material use); USES (Uses)  
(photosensitive compns. contg. light-sensitive resin and, for printing  
plates)

IT 106-90-1  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(polymn. of)

IT 107-13-1, reactions 39587-69-4  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(polymn. of, with epoxypentyl acrylate)

IT 100-42-5, reactions 142-90-5 25167-42-4 28851-51-6  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(polymn. of, with epoxypentyl methacrylate)

IT 106-91-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(polymn. of, with vinyl compds.)

IT 2888-10-0P 40133-53-7P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(prepn. and reaction of, with malonic acid)

IT 539-47-9P 7466-99-1P 24139-57-9P **42460-60-6P** 65541-70-0P  
65541-71-1P  
RL: **SPN (Synthetic preparation); PREP (Preparation)**  
(prepn. of)

IT 105-56-6  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with benzylidenacetone)

IT 103-82-2, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with chlorobenzaldehyde)

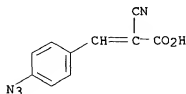
IT 372-09-8 6148-64-7  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with cinnamaldehyde)

IT 141-82-2, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with cinnamaldehyde derivs.)

IT 122-57-6  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with ethyl cyanoacetate)

IT 104-55-2 1466-88-2 1504-76-3  
RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with malonic acid)  
 IT 104-87-0 122-59-8  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with phenoxyacetic acid)  
 IT 104-88-1, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with phenylacetic acid)  
 IT 42460-60-6F  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)  
 RN 42460-60-6 HCAPLUS  
 CN 2-Propenoic acid, 3-(4-azidophenyl)-2-cyano- (9CI) (CA INDEX NAME)



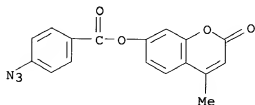
L59 ANSWER 54 OF 55 HCAPLUS COPYRIGHT 2003 ACS  
 AN 1972:87152 HCAPLUS  
 DN 76:87152  
 TI **Polymer-reactive** dyes, fluorescent whiteners, and uv  
 light-absorbers  
 IN Holstead, Colin; Jeffreys, Roy A.; Shuttleworth, Leslie  
 PA Eastman Kodak Co.  
 SO Ger. Offen., 23 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 IC D06L  
 CC 40 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)  
 Section cross-reference(s): 26, 27, 28, 36, 42

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2115756	A	19711111	DE 1971-2115756	19710331
FR 2095502	A5	19720211	FR 1971-11144	19710330
BE 765113	A1	19710930	BE 1971-101653	19710331
PRAI GB 1970-15514		19700401		

AB (Quinolylazo)naphthols, (quinolylazo)indolizines, (phenylazo)naphthols, (triazinylamino)coumarins, bis(triazinylamino)azobenzenes, bis(phenylazo)naphthalenes, (benzoyloxy)coumarins, and (oxonaphthalenesulfonamido)azobenzenes contg. .geq.1 CBr3, CHBr2, N3, N2, or O2CN3 group were prepd. The compds. could be used for modifying polyolefins, polyesters, and other hydrophobic **polymers** by **reacting** with the **polymer** upon heating or irradiation. For example, 6-acetamido-5-bromo-2-(tribromomethyl)quinoline was dissolved in H2SO4, heated 10 min at .sim.100.deg., cooled to 15.deg., NaNO2 added, and the mixt. poured onto ice. The diazonium salt was dissolved in EtOH-water and added to 2-naphthol in EtOH to give yellow 1-[5-bromo-2-(tribromomethyl)-6-quinolylazo]-2-naphthol (I) [34381-77-6]. 7-[[4-Azido-6-(diethylamino)-s-triazin-2-yl]amino]-3-phenylcoumarin [34381-78-7], 6-diazo-5,6-dihydro-5-oxo-4'-(phenylazo)-1-

ST naphthalenesulfonamide [34342-47-7], and 12 other compds. were prepd.  
 diazo compd; azido compd; tribromomethyl compd; dibromomethyl compd;  
 coumarin deriv reactive; triazine deriv reactive; azo compd reactive;  
 disazo compd reactive; dye **polymer reactive**; pigment  
**polymer reactive**; fluorescent whitener **polymer**  
**reactive**; UV absorber **polymer reactive**;  
**polymer reactive dye**  
 IT Dyes, reactive  
 (diazo- or azido-contg.)  
 IT 34342-47-7P 34381-77-6P 34381-78-7P 35472-87-8P 35472-88-9P  
 35472-89-0P 35472-90-3P 35472-91-4P 35472-92-5P 35472-93-6P  
 35472-94-7P **35472-95-8P** 35472-96-9P 35472-97-0P  
 35472-98-1P 35472-99-2P 35558-37-3P 35558-38-4P 35558-39-5P  
 35644-10-1P  
 RL: **IMF (Industrial manufacture)**; **PREP (Preparation)**  
 (prepn. of)  
 IT **35472-95-8P**  
 RL: **IMF (Industrial manufacture)**; **PREP (Preparation)**  
 (prepn. of)  
 RN 35472-95-8 HCAPLUS  
 CN Benzoic acid, 4-azido-, 4-methyl-2-oxo-2H-1-benzopyran-7-yl ester (9CI)  
 (CA INDEX NAME)



L59 ANSWER 55 OF 55 HCAPLUS COPYRIGHT 2003 ACS

AN 1972:40240 HCAPLUS

DN 76:40240

TI Multilayer photographic materials

IN Holstead, Colin

PA Eastman Kodak Co.

SO Ger. Offen., 71 pp.

CODEN: GWXXBX

DT Patent

LA German

IC G03C

CC 74 (Radiation Chemistry, Photochemistry, and Photographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2122060	A	19711118	DE 1971-2122060	19710504
	BE 766716	A1	19711001	BE 1971-103053	19710504
	FR 2091142	A5	19720114	FR 1971-15932	19710504
	JP 52025729	B4	19770709	JP 1971-28943	19710504
PRAI	GB 1970-21281		19700504		

AB Migration of photog. dyes from emulsion layers is prevented by condensing the dye with a hydrophobic polymer, such as Epolene, Pliolite, or poly(vinyl cinnamate). Thus, 50 g melted Epolene C 10 was treated at 100.degree. for 30 min with 0.05 g 1-[5-bromo-2-(tribromomethyl)-6-

- quinolinyl]azo-2-naphthol, molded into a sheet, and irradiated with a uv lamp for 60 min to bind 36% of the dye.
- ST dye photog polyethylene condensation; migration dye photog emulsion
- IT Photographic emulsions  
(color, additive migration prevention in, by condensation with polymers)
- IT 1,3-Butadiene, **polymer** with ethenylmethylbenzene, **reaction** products with dyes
- 2-Propenoic acid, 3-phenyl-, ethenyl ester, homopolymer, reaction products with dyes
- Benzene, ethenylmethyl-, polymer with 1,3-butadiene, reaction products with dyes
- Ethene, homopolymer, reaction products with dyes
- RL: USES (Uses)  
(color photog. emulsions contg., for preventing additive migration)
- IT 1,3,5-Triazin-2-amine, N,N'- (azodi-4,1-phenylene)bis[4,6-diazo-, **reaction** products with vinyl **polymers**
- 1,3,5-Triazin-2-amine, N,N'- (azodi-4,1-phenylene)bis[4,6-dichloro-, **reaction** products with vinyl **polymers**
- 1,3,5-Triazine-2,4-diamine, 6-azido-N,N-diethyl-N'-[4-(phenylazo)phenyl]-, **reaction** products with vinyl **polymers**
- 1-Naphthalenesulfonamide, 6-diazo-5,6-dihydro-5-oxo-N-[4-(phenylazo)phenyl]-, **reaction** products with vinyl **polymers**
- 1-Naphthalenol, 2-[(4-azidophenyl)azo]-4-methoxy-, **reaction** products with vinyl **polymers**
- 1-Naphthalenol, 5-azido-2-[[4-(dimethylamino)phenyl]azo]-, **reaction** products with vinyl **polymers**
- 2,7-Naphthalenedisulfonic acid, 4-amino-6-[(4-azidophenyl)azo]-5-hydroxy-3-[(4-nitrophenyl)azo]-, disodium salt, **reaction** products with vinyl **polymers**
- 2-Naphthalenesulfonamide, 1,2,3,4-tetrahydro-1,4-dioxo-N-[4-(phenylazo)phenyl]-, **reaction** products with vinyl **polymers**
- 2-Naphthalenol, 1-[(4-azidophenyl)azo]-, **reaction** products with vinyl **polymers**
- 2-Naphthalenol, 1-[[3-bromo-2-(dibromomethyl)-4-quinolinyl]azo]-, **reaction** products with vinyl **polymers**
- 2-Naphthalenol, 1-[[5-bromo-2-(tribromomethyl)-6-quinolinyl]azo]-, **reaction** products with vinyl **polymers**
- 2H-1-Benzopyran-2-one, 7-[[4-(4-azidophenoxy)-6-(diethylamino)-1,3,5-triazin-2-yl]amino]-3-phenyl-, **reaction** products with vinyl **polymers**
- 2H-1-Benzopyran-2-one, 7-[[4-azido-6-(diethylamino)-1,3,5-triazin-2-yl]amino]-3-phenyl-, **reaction** products with vinyl **polymers**
- 3-Quinololinol, 2-(dibromomethyl)-4-[(1,2-diphenyl-3-indoliziny]azo]-, **reaction** products with vinyl **polymers**
- Benzoic acid, 4-azido-, 4-methyl-2-oxo-2H-1-benzopyran-7-yl ester, **reaction** products with vinyl **polymers**
- Carbonazidic acid, 2-[4-[(2-hydroxy-1-naphthalenyl)azo]phenyl]ethyl ester, **reaction** products with vinyl **polymers**
- Indolizine, 3-quinolinol deriv., **reaction** products with vinyl **polymers**
- Indolizine, quinoline deriv., **reaction** products with vinyl **polymers**
- Quinoline, 5-bromo-6-[(1,2-diphenyl-3-indoliziny]azo]-2-(tribromomethyl)-, **reaction** products with vinyl **polymers**

RL: USES (Uses)

(for color photographic emulsions)

IT 34342-47-7P 34381-77-6P 34381-78-7P 35472-87-8P 35472-88-9P  
 35472-89-0P 35472-90-3P 35472-91-4P 35472-92-5P 35472-93-6P  
 35472-94-7P **35472-95-8P** 35472-97-0P 35558-37-3P  
 35558-38-4P 35558-39-5P 36403-59-5P

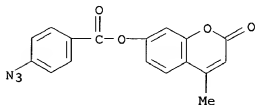
RL: **SPN (Synthetic preparation); PREP (Preparation)**  
 (prepn. of)

IT **35472-95-8P**

RL: **SPN (Synthetic preparation); PREP (Preparation)**  
 (prepn. of)

RN 35472-95-8 HCAPLUS

CN Benzoic acid, 4-azido-, 4-methyl-2-oxo-2H-1-benzopyran-7-yl ester (9CI)  
 (CA INDEX NAME)



RL: USES (Uses)  
(for color photographic emulsions)

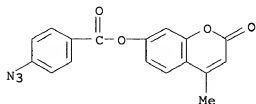
IT 34342-47-7P 34381-77-6P 34381-78-7P 35472-87-8P 35472-88-9P  
35472-89-0P 35472-90-3P 35472-91-4P 35472-92-5P 35472-93-6P  
35472-94-7P **35472-95-8P** 35472-97-0P 35558-37-3P  
35558-38-4P 35558-39-5P 36403-59-5P

RL: **SPN (Synthetic preparation); PREP (Preparation)**  
(prepn. of)

IT **35472-95-8P**  
RL: **SPN (Synthetic preparation); PREP (Preparation)**  
(prepn. of)

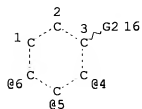
RN 35472-95-8 HCAPLUS

CN Benzoic acid, 4-azido-, 4-methyl-2-oxo-2H-1-benzopyran-7-yl ester (9CI)  
(CA INDEX NAME)

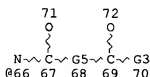
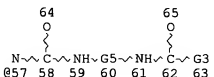
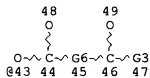
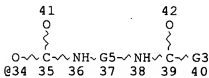
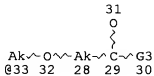
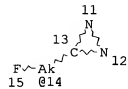


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L33

STR



G1 @7



VAR G1=14/10

VAR G2=18/19/20/24/33/34/43/51/52/53/57/66

VAR G3=O/N

VAR G4=O/S

VAR G5=AK/CB

VAR G6=AK/CB

VPA 7-4/5/6 U

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ELEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 72

STEREO ATTRIBUTES: NONE

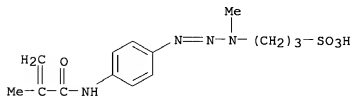
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 L36 2821 SEA FILE=HCAPLUS ABB=ON L35  
 L37 1283 SEA FILE=HCAPLUS ABB=ON L36(L) (PREP OR IMF OR SPN)/RL  
 L38 18 SEA FILE=HCAPLUS ABB=ON L37 AND REACT?(3A) POLYMER?  
 L39 8 SEA FILE=HCAPLUS ABB=ON L37 AND COATING#/SC, SX  
 L40 16 SEA FILE=HCAPLUS ABB=ON L37 AND (?TELOM? OR ?OLIGOMER?)  
 L42 28 SEA FILE=HCAPLUS ABB=ON L37(L) (?THIO? OR ?MERCAPTO?)  
 L45 1 SEA FILE=HCAPLUS ABB=ON L42 AND PHARMACE?/SC, SX  
 L47 38 SEA FILE=HCAPLUS ABB=ON L38 OR L39 OR L40 OR L45  
 L49 208 SEA FILE=REGISTRY ABB=ON L35 AND PMS/CI  
 L50 156 SEA FILE=HCAPLUS ABB=ON L49  
 L51 56 SEA FILE=HCAPLUS ABB=ON L50(L) (PREP OR IMF OR SPN)/RL  
 L52 14 SEA FILE=HCAPLUS ABB=ON L51 AND (COATING? OR PHARMACE?)/SC, SX  
  
 L53 49 SEA FILE=HCAPLUS ABB=ON L47 OR L52  
 L54 117 SEA FILE=HCAPLUS ABB=ON L35/DP  
 L56 1 SEA FILE=HCAPLUS ABB=ON L54 AND (?TELOM? OR ?OLIGOM?)  
 L57 5 SEA FILE=HCAPLUS ABB=ON L54 AND COATING?/SC, SX  
 L58 15 SEA FILE=HCAPLUS ABB=ON L54 AND PHARMACE?/SC, SX  
 L59 55 SEA FILE=HCAPLUS ABB=ON L53 OR (L56 OR L57 OR L58)  
 L60 5 SEA FILE=REGISTRY ABB=ON L49 AND 1-5/S  
 L65 5 SEA FILE=HCAPLUS ABB=ON L60  
 L66 3 SEA FILE=HCAPLUS ABB=ON (L65 OR L59) NOT L59

=&gt; d 166 1-3 bib abs hitstr

L66 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2003 ACS  
 AN 2002:963784 HCAPLUS  
 DN 138:31065  
 TI Uv-sensitive imaging element for making lithographic printing plates  
 IN Van Damme, Marc; Hendrikx, Peter; Van Aert, Huub  
 PA Agfa-Gevaert, Belg.  
 SO Eur. Pat. Appl., 16 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN.CNT 1

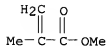
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1267211	A1	20021218	EP 2001-211	20010613
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				

JP 2003076021 A2 20030314 JP 2002-171476 20020612  
 PRAI EP 2001-211 A 20010613  
 AB An imaging element is disclosed for making a lithog. printing plate comprising a lithog. support and an imaging layer comprising (i) a polymer having aryldiazosulfonate units and/or aryltriazenylsulfonate units and (ii) a compd. capable of generating a radical and/or an acid upon exposure to UV light. The imaging element can be exposed by UV light and developed by water or an aq. soln. Exposure and/or development can be performed on or off press.  
 IT **478308-86-0P**  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (uv-sensitive imaging element for making lithog. printing plates)  
 RN 478308-86-0 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 3-[1-methyl-3-[4-[(2-methyl-1-oxo-2-propenyl)amino]phenyl]-2-triazenyl]-1-propanesulfonic acid monosodium salt (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 478308-85-9  
 CMF C14 H20 N4 O4 S . Na



● Na

CM 2  
 CRN 80-62-6  
 CMF C5 H8 O2



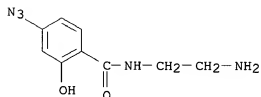
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L66 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2003 ACS  
 AN 1992:210269 HCAPLUS  
 DN 116:210269  
 TI Spectral and photochemical properties of some photobiotins  
 AU Shcherbo, S. N.; Patsaeva, S. V.; Yuzhakov, V. I.; Turchinskii, M. F.  
 CS M. V. Lomonosov Moscow State Univ., Moscow, USSR  
 SO Biofizika (1992), 37(1), 34-8

KATHLEEN FULLER EIC 1700/PARKER LAW 308-4290

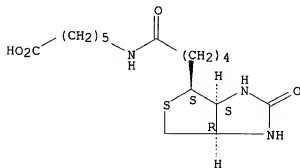


CODEN: BIOFAI; ISSN: 0006-3029  
 DT Journal  
 LA Russian  
 AB Spectral and photochem. properties of 2 types of photobiotin mols. contg. different photoactivated groups were studied. Spectra of 1H-NMR in deuterated water and of the absorption of water solns. of photobiotins under study were obtained. Changes of their parameters after UV-irradn. of the amples were analyzed. The effects of structural factors, solvent pH, wavelength of the irradiating light, and irradsn. time on the rate and result of photochem. decompn. of the compds. studied were considered.  
 IT 141117-59-1  
 RL: BIOL (Biological study)  
 (photochem. and spectral properties of)  
 RN 141117-59-1 HCAPLUS  
 CN Hexanoic acid, 6-[[5-(hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl)-1-oxopentyl]amino]-, [3aS-(3a.alpha.,4.beta.,6a.alpha.)]-, polymer with N-(2-aminoethyl)-4-azido-2-hydroxybenzamide and 1,2-ethanediamine (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 121892-63-5  
 CMF C9 H11 N5 O2



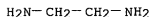
CM 2  
 CRN 72040-64-3  
 CMF C16 H27 N3 O4 S

Absolute stereochemistry.



CM 3

CRN 107-15-3  
CMF C2 H8 N2



L66 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2003 ACS

AN 1992:22343 HCAPLUS

DN 116:22343

TI Conducting polymers as deep-UV and electron beam resists: direct production of micrometer scale conducting structures from poly(3-octylthiophene)

AU Cai, Sui Xiong; Keana, John F. W.; Nabity, J. C.; Wybourne, M. N.

CS Dep. Chem., Univ. Oregon, Eugene, OR, 97403, USA

SO Journal of Molecular Electronics (1991), 7(2), 63-8

CODEN: JMELE4; ISSN: 0748-7991

DT Journal

LA English

AB The development of compns. of poly(3-octylthiophene) (I) with ethylene 1,2-bis(4-azido-2,3,5,6-tetrafluorobenzoate) (II) as deep-UV and electron-beam (EB) resists is described. Compns. contg. 4-6 wt% II served as neg. deep-UV resists while I itself was found to be a neg. EB resist with a sensitivity of 15-30 .mu.C cm-2. The crosslinked I retained the elec. cond. of the original I, hence crosslinking probably occurred via the octyl side-chain rather than the thiophene ring. I was used for the direct prodn. of micrometer-scale conducting structures via EB lithog. The elec. cond. of these structures was 4.0-5.9 .OMEGA.-1 cm-1.

IT 137961-39-8P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(crosslinked, prepn. and structural evaluation of, as deep-UV resists)

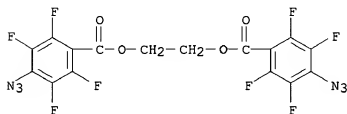
RN 137961-39-8 HCAPLUS

CN Benzoic acid, 4-azido-2,3,5,6-tetrafluoro-, 1,2-ethanediyl ester, polymer with 3-octylthiophene (9CI) (CA INDEX NAME)

CM 1

CRN 129835-91-2

CMF C16 H4 F8 N6 O4



CM 2

CRN 65016-62-8

CMF C12 H20 S